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UNIT-SPECIFIC TECHNICAL MEMORANDUM: X-194 ABOVEGROUND STORAGE TANK

PRATT & WHITNEY, EAST HARTFORD, CT

AREA: North Klondike

SUB-AREA: X-194 (also known as X-448)

ENVIRONMENTAL UNIT: X-194 Aboveground Storage Tank

RCRA RECORDS CENTER
FACILITY Pratt & Whitney
I.D. NO. CTD 990672081
FILE LOC. R-5
OTHER RDMS# 2227

Location: In the North Klondike Area, third road south on the North Access Road from the Perimeter Road (Drawing 1). The former aboveground storage tank (AST) was located east of the X-194 Test Stand.

Description: A former 1,000-gallon No. 2 fuel oil AST was located near the fence in the northwest corner of the X-194 Area. Presently, no evidence of the tank's presence remains.

Dates of Operation: Approximately 1957 to 1993 based on the dates of operation of the X-194 test stand.

Processes: Supply fuel oil to the X-194 Test Stand buildings.

Aerial Photographs: Large-scale aerial photographs for 1965, 1970, and 1975 were obtained from Keystone Aerial Surveys, Inc. One small aerial photo was obtained from the Pratt & Whitney (P&W) Photographic Services Department.

All of these aerial photographs portray an aboveground fuel oil tank located in close proximity to the northeast corner of the X-194 Area.

Specific Contaminants of Concern: No. 2 fuel oil is the primary constituent of concern. In order to be as comprehensive as possible in the investigation that was conducted, the following constituent groups were analyzed for: volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, nickel, and zinc), and total petroleum hydrocarbons (TPH).

Potential Release Mechanism: Impacts to soils and groundwater from potential spills or leaks associated with tank filling and tank leakage from the bulk fuel oil storage tank.

INVESTIGATION AND REMEDIATION ACTIVITIES:

Due to the potential for a release associated with the former 1,000-gallon fuel oil AST, a subsurface investigation to determine the degree and extent of soil contamination in the vicinity of the tank was performed in May 1997 and March 1997. Prior to 1997, no investigation of this tank had reportedly been performed.

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March 1997 Investigation (Loureiro Engineering Associates, P.C.):

Description: On March 6 and 7, 1997, four soil borings, NK-SB-260 through NK-SB-263, were advanced in the vicinity of the former AST by Loureiro Engineering Associates, P.C. (LEA). The sampling locations are shown on Drawing 1. The boring locations were selected to provide coverage of the approximate footprint of the former AST. Soil samples were collected from each of the borings in continuous 2-foot intervals to 12 feet. The depth of 12 feet was selected to ensure that the varved clay was encountered and that sufficient data was collected for comparisons against the direct exposure criteria (DEC) in the Connecticut Remediation Standard Regulation (RSR).

A total of twenty-five soil samples were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs [benzene (BZ), ethylbenzene (EBZ), tetrachloroethylene (PCE), toluene (TL), 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and xylenes (XYL)]. Based on visual, olfactory, or instrument evidence, and with consideration of the potential release mechanism, two samples from each of the four borings were submitted to Averill Environmental Laboratory, Inc. (AEL). The samples were analyzed for the presence of VOCs, metals, and TPH. In addition, one soil sample per boring was also analyzed for SVOCs.

Groundwater samples were also collected from borings NK-SB-260 through NK-SB-263 using Geoprobe® screenpoint groundwater sampling techniques. Each of the groundwater samples was collected from a depth of 6 to 7 feet below the ground. The groundwater samples were submitted to AEL for analysis of VOCs, SVOCs, and TPH. A summary of the samples collected and analyses performed is included in Table 1.

Investigation Results: Based on the boring logs, groundwater was encountered at approximately 2 feet in boring NK-SB-262 and at 4 feet in the three remaining borings. Varved clay was encountered at 11 feet in borings NK-SB-260 and NK-SB-262. Varved clay was encountered at 11.5 feet in borings NK-SB-261 and NK-SB-263. No visual or olfactory evidence of contamination was noted in the boring logs for these soil borings.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Detected concentrations at each sampling location are shown on Drawing 1. VOCs were not detected in the soil samples submitted to the LEA Analytical Laboratory or AEL.

One SVOC was detected in three of the four soil borings. Di-n-butyl phthalate (DBP) was detected in borings NK-SB-261, NK-SB-262, and NK-SB-263, with the highest detect noted at 1000 micrograms per kilogram ($\mu\text{g/kg}$). No other SVOCs were detected in the soil samples submitted to AEL. However, several SVOCs were noted as "N1" in boring NK-SB-262 at 0 to 2 feet in the sample analyzed by AEL. The "N1" qualifier indicates that the compound analyzed was noted above the method detection limit, but below the reportable quantitation limit. These SVOCs qualified as noted include benzo[a]anthracene (BA), benzo[a]pyrene (BAP), benzo[b]fluoranthene (BBF), benzo[ghi]perylene (BGP), chrysene (CRYS), fluoranthene (FA), indeno(1,2,3-cd)pyrene (IP), phenanthrene (PHN), and pyrene (PYR).

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- This will be discussed
- X 194
- JSM
- 1/10
- 1000 micrograms per kilogram
- 1000 micrograms per kilogram
- 1000 micrograms per kilogram

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One or more of the metals analyzed were detected in each of the soil samples submitted to AEL for analysis. These metals include barium, chromium, mercury, and zinc. TPH was not detected in the soil samples submitted to AEL. VOCs, SVOCs, and TPH were not detected in any of the groundwater samples submitted to AEL. A complete summary of groundwater analytical results with detection limits is presented in Table 4.

Data Evaluation and Conclusions: Based on the presence of DBP in the vicinity of the former AST, there is evidence that a release may have occurred. DBP has reportedly been used as a plasticizer in explosives and solid rocket propellants (Hawley, 1981). However, the specific use of DBP in the X-194 Area by P & W has not been documented. The source for the DBP may be from the solid rocket fuel testing previously performed in the X-194 Area. The degree and extent of soil and groundwater contamination resulting from potential releases from the fuel oil AST has been adequately characterized. However, the degree and extent of soil contamination resulting from the DBP has not been adequately characterized.

The data were compared against the default numeric criteria included in the RSR and the site-wide background soil concentrations for the North Klondike for various inorganic constituents (Fuss & O'Neill, 1994). For a more detailed discussion of background concentrations of metals in soil refer to *Technical Memorandum 4, Background Soil Data*. Criteria are established in the RSR based on exposure pathways for various environmental media, including soil and groundwater. A qualitative evaluation was performed because characterization of the identified contamination has not been completed. The intent of the comparison is not to show compliance with the RSR, but rather to give a general perspective regarding the magnitude of contamination detected. The evaluation of the soils data is based on a comparison to the residential direct exposure criteria (RDEC) and the industrial/commercial direct exposure criteria (IDEC) and the GB pollutant mobility criteria (PMC) included in the RSR, as well as the site-wide background soil concentrations for inorganic constituents.

The concentrations of the metals detected in the soil samples are typical of site-wide soil background concentrations, except for mercury in boring NK-SB-261 at a depth of 0 to 2 feet. Mercury was detected at a concentration of 0.796 milligrams per kilogram (mg/kg), which was slightly above the site-wide soil background concentration for this metal. Since none of the other metals were elevated in this sample and mercury was not detected above background in any of the other soil samples, it is believed that this concentration is representative of background concentrations at this location. Thus, the metals detected are not indicative of a release at this unit. For the metals detected in soil, no exceedances of the RDEC or IDEC were noted.

The analytical results for groundwater samples immediately below this unit did not indicate the presence of VOCs, SVOCs, or TPH. For the DBP that was detected, no exceedances of the default numeric RDEC, IDEC, and the GBPMC were noted.

May 1997 Investigation (LEA):

Description: On May 22, 1997, seven soil borings, NK-SB-293, NK-SB-294, NK-SB-295, NK-SB-296, NK-SB-297, NK-SB-298 and NK-SB-304, were advanced in the vicinity of the former AST. The sampling locations are shown on Drawing 1. Soil samples were collected from each

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of the borings in continuous 2-foot intervals to 4 feet. This limited additional soil investigation was performed to define the extent of the contamination in the vicinity of soil borings NK-SB-261 through NK-SB-263 in which DBP had been detected at 0 to 2 feet. The depth of 4 feet was selected based on the shallow interval, 0 to 2 feet, that DBP contamination had previously been detected.

A total of fourteen soil samples from depths of 0 to 2 and 2 to 4 feet (above the water table) from these additional borings were submitted to Quanterra Inc. (QNT) and analyzed for the presence of SVOCs. A summary of the samples collected and analyses is included in Table 1.

Investigation Results: Based on the boring logs, groundwater was encountered between 2 and 4 feet in all seven borings. No visual or olfactory evidence of contamination was noted on the boring logs.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. SVOCs were not detected in the seven soil borings.

Data Evaluation and Conclusions: Based on the presence of DBP detected during the March 1997 investigation in the vicinity of the AST, there is evidence that a limited release may have occurred. DBP was not detected during the May 1997 investigation to delineate the extent of the DBP contamination. The degree and extent of soil contamination resulting from potential releases from the fuel oil AST and from the DBP detected has been adequately characterized.

Based on the results of the laboratory analyses of soil samples, this unit is believed to be adequately characterized. No exceedances of the default numeric criteria included in the RSR were noted. As a result, no further investigation or remediation is warranted at this unit. The analytical results for groundwater samples immediately below this unit did not indicate the presence of VOCs, SVOCs, or TPH. The groundwater data for this unit supports the conclusion that no further action is warranted.

REFERENCES:

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P&W Photographic Services Department, 1977, *Aerial Photograph, Negative Number Z-36268*, Pratt & Whitney, East Hartford, CT.

P&W Plant Engineering Department, May 24, 1976, *Plan of Fire Protection System, East Hartford Plant*, Pratt & Whitney Aircraft, East Hartford, CT.

Westinghouse Environmental and Geotechnical Services, Inc. November 1990, *Current Assessment Summary Report*, Pratt & Whitney, East Hartford,

TABLES

Table 1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
P&W East Hartford: X-194 Aboveground Storage Tank

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Sample Information						Analysis Information								
Location ID	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Extraction	Miscellaneous
NK-SB-260	1027033	3/ 6/97	0	2	SB	x	x	x				X		x
NK-SB-260	1027034	3/ 6/97	2	4	SB	x								
NK-SB-260	1027035	3/ 6/97	2	4	SB	x								
NK-SB-260	1027036	3/ 6/97	4	6	SB	x	x					X		x
NK-SB-260	1027037	3/ 6/97	6	8	SB	x								
NK-SB-260	1027038	3/ 6/97	8	10	SB	x								
NK-SB-260	1027039	3/ 6/97	10	12	SB	x								
NK-SB-260	1027131	3/ 7/97	6.0	7.0	GW		x	x						x
NK-SB-261	1027040	3/ 6/97	0	2	SB	x	x	X				X		
NK-SB-261	1027041	3/ 6/97	2	4	SB	x								
NK-SB-261	1027042	3/ 6/97	4	6	SB	x	x					X		x
NK-SB-261	1027043	3/ 6/97	6	8	SB	x								
NK-SB-261	1027044	3/ 6/97	8	10	SB	x								
NK-SB-261	1027045	3/ 6/97	10	12	SB	x								
NK-SB-261	1027132	3/ 7/97	6.0	7.0	GW		x	x						x
NK-SB-262	1027046	3/ 6/97	0	2	SB	x	x	X				X		x
NK-SB-262	1027047	3/ 6/97	2	4	SB	x								
NK-SB-262	1027048	3/ 6/97	4	6	SB	x	x					X		x
NK-SB-262	1027049	3/ 6/97	6	8	SB	x								
NK-SB-262	1027050	3/ 6/97	8	10	SB	x								
NK-SB-262	1027051	3/ 6/97	10	12	SB	x								
NK-SB-262	1027133	3/ 7/97	6.0	7.0	GW		x	x						x
NK-SB-263	1027052	3/ 6/97	0	2	SB	x	x	X				X		x
NK-SB-263	1027053	3/ 6/97	2	4	SB	x								
NK-SB-263	1027054	3/ 6/97	4	6	SB	x	x					X		x
NK-SB-263	1027055	3/ 6/97	6	8	SB	x								
NK-SB-263	1027056	3/ 6/97	8	10	SB	x								
NK-SB-263	1027057	3/ 6/97	10	12	SB	x								
NK-SB-263	1027134	3/ 7/97	6.0	7.0	GW		x	x						x
NK-SB-293	1634105	5/22/97	0	2	SB			x						
NK-SB-293	1634106	5/22/97	2	4	SB			x						

Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit

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Notes: 1. Only Detects Shown
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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Date Metals Analyzed	-	03/18/1997				03/18/1997		
Date Organics Analyzed	-	03/20/1997	03/08/1997	03/08/1997	03/08/1997	03/20/1997	03/08/1997	03/08/1997
Date Semi-volatile Organics Analyzed	-	04/04/1997						
Dinoseb	µg/kg							
Arsenic	mg/kg	<0.45				<0.5		
Barium	mg/kg	9.96				6.96		
Cadmium	mg/kg	<3.36				<3.66		
Chromium	mg/kg	6.38				<6.1		
Lead	mg/kg	<22.4				<24.4		
Mercury	mg/kg	<0.09				<0.10		
Nickel	mg/kg	<11.2				<12.2		
Selenium	mg/kg	<1.12				<1.22		
Silver	mg/kg	<5.6				<6.1		
Zinc	mg/kg	13.4				13.1		
Acetylaminofluorene,2-	µg/kg							
Aramite	µg/kg							
Dimethoate	µg/kg							
Disulfoton	µg/kg							
Famphur	µg/kg							
Phorate	µg/kg							
Total Petroleum Hydrocarbons	mg/kg	<37.9				<40.6		
Acenaphthene	µg/kg	<380						
Acenaphthylene	µg/kg	<380						
Acetophenone	µg/kg							
Aminobiphenyl,4-	µg/kg							
Aniline	µg/kg							
Anthracene	µg/kg	<380						
Benzidine	µg/kg	<380						

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Benzo[a]anthracene	µg/kg	<380						
Benzo[a]pyrene	µg/kg	<380						
Benzo[b]fluoranthene	µg/kg	<380						
Benzo[ghi]perylene	µg/kg	<380						
Benzo[k]fluoranthene	µg/kg	<380						
Benzoic Acid	µg/kg							
Benzyl Alcohol	µg/kg							
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg	<380						
Bis(2-chloroethyl) Ether	µg/kg	<380						
Bis(2-ethylhexyl) Phthalate	µg/kg	<380						
Bromophenyl Phenyl Ether, 4-	µg/kg	<380						
Butyl Benzyl Phthalate	µg/kg	<380						
Carbazole	µg/kg							
Chloro-m-cresol, p-	µg/kg							
Chloroaniline, 4-	µg/kg							
Chloronaphthalene, 2-	µg/kg	<380						
Chlorophenol, 2-	µg/kg	<380						
Chlorophenyl Phenyl Ether, 4-	µg/kg	<380						
Chrysene	µg/kg	<380						
Cresol, 2-	µg/kg							
Cresol, 3-	µg/kg							
Cresol, 4-	µg/kg							
Di-n-butyl Phthalate	µg/kg	<380						
Di-n-octyl Phthalate	µg/kg	<380						
Dibenzo[a,h]anthracene	µg/kg	<380						
Dibenzofuran	µg/kg							
Dichlorobenzidine, 3,3'-	µg/kg	<380						

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SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Dichlorophenol,2,4-	µg/kg	<380						
Diethyl Phthalate	µg/kg	<380						
Dimethyl Phthalate	µg/kg	<380						
Dimethylaminoazobenzene,4-	µg/kg							
Dimethylbenzidine,3,3'-	µg/kg							
Dimethylbenzo[a]anthracene,7,12-	µg/kg							
Dimethylphenethylamine, alpha, alpha-	µg/kg							
Dimethylphenol,2,4-	µg/kg	<380						
Dinitro-o-cresol,4,6-	µg/kg	<380						
Dinitrobenzene,1,3-	µg/kg							
Dinitrophenol,2,4-	µg/kg	<380						
Dinitrotoluene,2,4-	µg/kg	<380						
Dinitrotoluene,2,6-	µg/kg	<380						
Diphenylamine	µg/kg							
Diphenylhydrazine,1,2-	µg/kg	<380						
Ethyl Methanesulfonate	µg/kg							
Fluoranthene	µg/kg	<380						
Fluorene	µg/kg	<380						
Hexachlorobenzene	µg/kg	<380						
Hexachlorobutadiene	µg/kg	<380						
Hexachlorocyclopentadiene	µg/kg	<380						
Hexachloroethane	µg/kg	<380						
Hexachlorophene	µg/kg							
Hexachloropropylene	µg/kg							
Indeno(1,2,3-cd)pyrene	µg/kg	<380						
Isophorone	µg/kg	<380						
Isosafrole	µg/kg							
Methapyrilene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Methyl Methanesulfonate	µg/kg							
Methylcholanthrene,3-	µg/kg							
Methylnaphthalene,2-	µg/kg							
N-nitroso-di-n-butylamine	µg/kg							
N-nitroso-n-propylamine	µg/kg	<380						
N-nitrosodiethylamine	µg/kg							
N-nitrosodimethylamine	µg/kg	<380						
N-nitrosodiphenylamine	µg/kg	<380						
N-nitrosomethylethylamine	µg/kg							
N-nitrosomorpholine	µg/kg							
N-nitrosopiperidine	µg/kg							
Naphthalene	µg/kg	<380						
Naphthoquinone,1,4-	µg/kg							
Naphthylamine,alpha-	µg/kg							
Naphthylamine,beta-	µg/kg							
Nitro-o-toluidine,5-	µg/kg							
Nitroaniline,2-	µg/kg							
Nitroaniline,3-	µg/kg							
Nitroaniline,4-	µg/kg							
Nitrobenzene	µg/kg	<380						
Nitrophenol,2-	µg/kg	<380						
Nitrophenol,4-	µg/kg	<380						
Nitroquinoline-1-oxide,4-	µg/kg							
Nitrosopyrrolidine,n-	µg/kg							
Pentachlorophenol	µg/kg	<380						
Phenacetin	µg/kg							
Phenanthrene	µg/kg	<380						
Phenol	µg/kg	<380						

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg							
Picoline, 2-	µg/kg							
Pronamide	µg/kg							
Propane), 2,2'-oxybis(1-chloro-	µg/kg							
Propane), 2,2'-oxybis(2-chloro-	µg/kg	<380						
Pyrene	µg/kg	<380						
Pyridine	µg/kg							
Safrrole	µg/kg							
Tetrachlorobenzene, 1,2,4,5-	µg/kg							
Tetrachlorophenol, 2,3,4,6-	µg/kg							
Toluidine, o-	µg/kg							
Trichlorobenzene, 1,2,4-	µg/kg	<380						
Trichlorophenol, 2,4,5-	µg/kg							
Trichlorophenol, 2,4,6-	µg/kg	<380						
Triethyl Phosphorothioate, o,o,o-	µg/kg							
Trinitrobenzene, 1,3,5-	µg/kg							
Acetone	µg/kg	<24				<24		
Acrolein	µg/kg	<12				<12		
Acrylonitrile	µg/kg	<12				<12		
Benzene	µg/kg	<4.8				<4.8		
Benzene (mobile)	µg/kg		<8	<8	<8		<8	<8
Bromobenzene	µg/kg	<4.8				<4.8		
Bromoform	µg/kg	<4.8				<4.8		
Carbon Disulfide	µg/kg	<4.8				<4.8		
Carbon Tetrachloride	µg/kg	<4.8				<4.8		
Chlorobenzene	µg/kg	<4.8				<4.8		
Chlorodibromomethane	µg/kg	<4.8				<4.8		
Chloroethane	µg/kg	<4.8				<4.8		

Notes: 1. Printed on 03/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260	NK-SB-260
	Sample ID	1027033	1027033	1027034	1027035	1027036	1027036	1027037
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:07	10:07	10:10	10:10	10:15	10:15	10:19
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	2' - 4'	4' - 6'	4' - 6'	6' - 8'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL97003099	97-1849-349	97-1850-350	97-1851-351	AEL97003100	97-1852-352	97-1853-353
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg	<4.8				<4.8		
Chloroform	µg/kg	<4.8				<4.8		
Chlorotoluene,o-	µg/kg	<4.8				<4.8		
Chlorotoluene,p-	µg/kg	<4.8				<4.8		
Dibromomethane	µg/kg	<4.8				<4.8		
Dichlorobenzene,1,2-	µg/kg	<4.8				<4.8		
Dichlorobenzene,1,3-	µg/kg	<4.8				<4.8		
Dichlorobenzene,1,4-	µg/kg	<4.8				<4.8		
Dichlorobromomethane	µg/kg	<4.8				<4.8		
Dichlorodifluoromethane	µg/kg	<4.8				<4.8		
Dichloroethane,1,1-	µg/kg	<4.8				<4.8		
Dichloroethane,1,2-	µg/kg	<4.8				<4.8		
Dichloroethylene,1,1-	µg/kg	<4.8				<4.8		
Dichloroethylene,1,2-cis-	µg/kg	<4.8				<4.8		
Dichloroethylene,1,2-trans-	µg/kg	<4.8				<4.8		
Dichloropropane,1,2-	µg/kg	<4.8				<4.8		
Dichloropropylene,1,3-cis-	µg/kg	<4.8				<4.8		
Dichloropropylene,1,3-trans-	µg/kg	<4.8				<4.8		
Ethylbenzene	µg/kg	<4.8				<4.8		
Ethylbenzene (mobile)	µg/kg		<17	<17	<17		<17	<17
Hexanone,2-	µg/kg	<12				<12		
Methyl Bromide	µg/kg	<4.8				<4.8		
Methyl Chloride	µg/kg	<4.8				<4.8		
Methyl Ethyl Ketone	µg/kg	<12				<12		
Methyl-2-pentanone,4-	µg/kg	<12				<12		
Methyl-tert-butyl Ether	µg/kg	<4.8				<4.8		
Methylene Chloride	µg/kg	<6.0				<4.8		
Pentachlorobenzene	µg/kg							

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Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Date Metals Analyzed	-			03/18/1997			03/18/1997	
Date Organics Analyzed	-	03/08/1997	03/08/1997	03/20/1997	03/10/1997	03/10/1997	03/20/1997	03/10/1997
Date Semi-volatile Organics Analyzed	-			04/04/1997				
Dinoseb	µg/kg							
Arsenic	mg/kg			<0.5			<0.47	
Barium	mg/kg			8.1			7.32	
Cadmium	mg/kg			<3.47			<3.54	
Chromium	mg/kg			<5.79			<5.91	
Lead	mg/kg			<23.1			<23.6	
Mercury	mg/kg			0.796			<0.09	
Nickel	mg/kg			<11.6			<11.8	
Selenium	mg/kg			<1.16			<1.18	
Silver	mg/kg			<5.79			<5.91	
Zinc	mg/kg			20.6			18.2	
Acetylaminofluorene,2-	µg/kg							
Aramite	µg/kg							
Dimethoate	µg/kg							
Disulfoton	µg/kg							
Famphur	µg/kg							
Phorate	µg/kg							
Total Petroleum Hydrocarbons	mg/kg						<39.9	
Acenaphthene	µg/kg			<380				
Acenaphthylene	µg/kg			<380				
Acetophenone	µg/kg							
Aminobiphenyl,4-	µg/kg							
Aniline	µg/kg							
Anthracene	µg/kg			<380				
Benzidine	µg/kg			<380				

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Benzo[a]anthracene	µg/kg			<380				
Benzo[a]pyrene	µg/kg			<380				
Benzo[b]fluoranthene	µg/kg			<380				
Benzo[ghi]perylene	µg/kg			<380				
Benzo[k]fluoranthene	µg/kg			<380				
Benzoic Acid	µg/kg							
Benzyl Alcohol	µg/kg							
Benzyl Butyl Phthalate	µg/kg			<380				
Bis(2-chloroethoxy)methane	µg/kg			<380				
Bis(2-chloroethyl) Ether	µg/kg			<380				
Bis(2-ethylhexyl) Phthalate	µg/kg			<380				
Bromophenyl Phenyl Ether, 4-	µg/kg			<380				
Butyl Benzyl Phthalate	µg/kg							
Carbazole	µg/kg							
Chloro-m-cresol, p-	µg/kg			<380				
Chloroaniline, 4-	µg/kg							
Chloronaphthalene, 2-	µg/kg			<380				
Chlorophenol, 2-	µg/kg			<380				
Chlorophenyl Phenyl Ether, 4-	µg/kg			<380				
Chrysene	µg/kg			<380				
Cresol, 2-	µg/kg							
Cresol, 3-	µg/kg							
Cresol, 4-	µg/kg							
Di-n-butyl Phthalate	µg/kg			870				
Di-n-octyl Phthalate	µg/kg			<380				
Dibenzo[a,h]anthracene	µg/kg			<380				
Dibenzofuran	µg/kg							
Dichlorobenzidine, 3,3'-	µg/kg			<380				

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Dichlorophenol,2,4-	µg/kg			<80				
Diethyl Phthalate	µg/kg			<80				
Dimethyl Phthalate	µg/kg			<80				
Dimethylaminoazobenzene,4-	µg/kg							
Dimethylbenzidine,3,3'-	µg/kg							
Dimethylbenzo[a]anthracene,7,12-	µg/kg							
Dimethylphenethylamine,alpha,alpha-	µg/kg							
Dimethylphenol,2,4-	µg/kg			<80				
Dinitro-o-cresol,4,6-	µg/kg			<80				
Dinitrobenzene,1,3-	µg/kg							
Dinitrophenol,2,4-	µg/kg			<80				
Dinitrotoluene,2,4-	µg/kg			<80				
Dinitrotoluene,2,6-	µg/kg			<80				
Diphenylamine	µg/kg							
Diphenylhydrazine,1,2-	µg/kg			<80				
Ethyl Methanesulfonate	µg/kg							
Fluoranthene	µg/kg			<80				
Fluorene	µg/kg			<80				
Hexachlorobenzene	µg/kg			<80				
Hexachlorobutadiene	µg/kg			<80				
Hexachlorocyclopentadiene	µg/kg			<80				
Hexachloroethane	µg/kg			<80				
Hexachlorophene	µg/kg							
Hexachloropropylene	µg/kg							
Indeno(1,2,3-cd)pyrene	µg/kg			<80				
Isophorone	µg/kg			<80				
Isosafrole	µg/kg							
Methapyrilene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Methyl Methanesulfonate	µg/kg							
Methylcholanthrene,3-	µg/kg							
Methylnaphthalene,2-	µg/kg							
N-nitroso-di-n-butylamine	µg/kg							
N-nitroso-n-propylamine	µg/kg			<380				
N-nitrosodiethylamine	µg/kg							
N-nitrosodimethylamine	µg/kg			<380				
N-nitrosodiphenylamine	µg/kg			<380				
N-nitrosomethylethylamine	µg/kg							
N-nitrosomorpholine	µg/kg							
N-nitrosopiperidine	µg/kg							
Naphthalene	µg/kg			<380				
Naphthoquinone,1,4-	µg/kg							
Naphthylamine,alpha-	µg/kg							
Naphthylamine,beta-	µg/kg							
Nitro-o-toluidine,5-	µg/kg							
Nitroaniline,2-	µg/kg							
Nitroaniline,3-	µg/kg							
Nitroaniline,4-	µg/kg							
Nitrobenzene	µg/kg			<380				
Nitrophenol,2-	µg/kg			<380				
Nitrophenol,4-	µg/kg			<380				
Nitroquinoline-1-oxide,4-	µg/kg							
Nitrosopyrrolidine,n-	µg/kg							
Pentachlorophenol	µg/kg			<380				
Phenacetin	µg/kg							
Phenanthrene	µg/kg			<380				
Phenol	µg/kg			<380				

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg							
Picoline, 2-	µg/kg							
Pronamide	µg/kg							
Propane), 2,2'-oxybis(1-chloro-	µg/kg			<380				
Propane), 2,2'-oxybis(2-chloro-	µg/kg							
Pyrene	µg/kg			<380				
Pyridine	µg/kg							
Saffrole	µg/kg							
Tetrachlorobenzene, 1,2,4,5-	µg/kg							
Tetrachlorophenol, 2,3,4,6-	µg/kg							
Toluidine, o-	µg/kg							
Trichlorobenzene, 1,2,4-	µg/kg			<380				
Trichlorophenol, 2,4,5-	µg/kg							
Trichlorophenol, 2,4,6-	µg/kg			<380				
Triethyl Phosphorothioate, o,o,o,-	µg/kg							
Trinitrobenzene, 1,3,5-	µg/kg							
Acetone	µg/kg			<40			<25	
Acrolein	µg/kg			<20			<12	
Acrylonitrile	µg/kg			<20			<12	
Benzene	µg/kg			<8.0			<4.9	
Benzene (mobile)	µg/kg	<8	<8		<8	<8		<8
Bromobenzene	µg/kg			<8.0			<4.9	
Bromoform	µg/kg			<8.0			<4.9	
Carbon Disulfide	µg/kg			<8.0			<4.9	
Carbon Tetrachloride	µg/kg			<8.0			<4.9	
Chlorobenzene	µg/kg			<8.0			<4.9	
Chlorodibromomethane	µg/kg			<8.0			<4.9	
Chloroethane	µg/kg			<8.0			<4.9	

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-260	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-261
	Sample ID	1027038	1027039	1027040	1027040	1027041	1027042	1027042
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	10:30	10:35	11:05	11:05	11:10	11:16	11:16
	Sample Depth	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'	4' - 6'
	Laboratory	LEA	LEA	AEL	LEA	LEA	AEL	LEA
	Lab. Number	97-1854-354	97-1855-355	AEL97003101	97-1860-360	97-1861-361	AEL97003102	97-1862-362
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg			<8.0			<4.9	
Chloroform	µg/kg			<8.0			<4.9	
Chlorotoluene,o-	µg/kg			<8.0			<4.9	
Chlorotoluene,p-	µg/kg			<8.0			<4.9	
Dibromomethane	µg/kg			<8.0			<4.9	
Dichlorobenzene,1,2-	µg/kg			<8.0			<4.9	
Dichlorobenzene,1,3-	µg/kg			<8.0			<4.9	
Dichlorobenzene,1,4-	µg/kg			<8.0			<4.9	
Dichlorobromomethane	µg/kg			<8.0			<4.9	
Dichlorodifluoromethane	µg/kg			<8.0			<4.9	
Dichloroethane,1,1-	µg/kg			<8.0			<4.9	
Dichloroethane,1,2-	µg/kg			<8.0			<4.9	
Dichloroethylene,1,1-	µg/kg			<8.0			<4.9	
Dichloroethylene,1,2-cis-	µg/kg			<8.0			<4.9	
Dichloroethylene,1,2-trans-	µg/kg			<8.0			<4.9	
Dichloropropane,1,2-	µg/kg			<8.0			<4.9	
Dichloropropylene,1,3-cis-	µg/kg			<8.0			<4.9	
Dichloropropylene,1,3-trans-	µg/kg			<8.0			<4.9	
Ethylbenzene	µg/kg			<8.0			<4.9	
Ethylbenzene (mobile)	µg/kg	<17	<17		<17	<17		<17
Hexanone,2-	µg/kg			<20			<12	
Methyl Bromide	µg/kg			<8.0			<4.9	
Methyl Chloride	µg/kg			<8.0			<4.9	
Methyl Ethyl Ketone	µg/kg			<20			<12	
Methyl-2-pentanone,4-	µg/kg			<20			<12	
Methyl-tert-butyl Ether	µg/kg			<8.0			<4.9	
Methylene Chloride	µg/kg			<8.0			<9.8	
Pentachlorobenzene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Date Metals Analyzed	-				03/18/1997			03/18/1997
Date Organics Analyzed	-	03/10/1997	03/10/1997	03/10/1997	03/20/1997	03/10/1997	03/10/1997	03/20/1997
Date Semi-volatile Organics Analyzed	-				04/04/1997			
Dinoseb	µg/kg							
Arsenic	mg/kg				<0.47			<0.48
Barium	mg/kg				13.1			8.81
Cadmium	mg/kg				<3.52			<3.57
Chromium	mg/kg				8.45			<5.95
Lead	mg/kg				<23.5			<23.8
Mercury	mg/kg				0.174			<0.10
Nickel	mg/kg				<11.7			<11.9
Selenium	mg/kg				<1.17			<1.19
Silver	mg/kg				<5.87			<5.95
Zinc	mg/kg				48.1			11.7
Acetylaminofluorene,2-	µg/kg							
Aramite	µg/kg							
Dimethoate	µg/kg							
Disulfoton	µg/kg							
Famphur	µg/kg							
Phorate	µg/kg							
Total Petroleum Hydrocarbons	mg/kg				<39.5			<41.1
Acenaphthene	µg/kg				<390			
Acenaphthylene	µg/kg				<390			
Acetophenone	µg/kg							
Aminobiphenyl,4-	µg/kg							
Aniline	µg/kg							
Anthracene	µg/kg				<390			
Benzidine	µg/kg				<390			

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Benzo[a]anthracene	µg/kg				<390 N1			
Benzo[a]pyrene	µg/kg				<390 N1			
Benzo[b]fluoranthene	µg/kg				<390 N1			
Benzo[ghi]perylene	µg/kg				<390 N1			
Benzo[k]fluoranthene	µg/kg				<390			
Benzoic Acid	µg/kg							
Benzyl Alcohol	µg/kg							
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg				<390			
Bis(2-chloroethyl) Ether	µg/kg				<390			
Bis(2-ethylhexyl) Phthalate	µg/kg				<390			
Bromophenyl Phenyl Ether, 4-	µg/kg				<390			
Butyl Benzyl Phthalate	µg/kg				<390			
Carbazole	µg/kg							
Chloro-m-cresol, p-	µg/kg							
Chloroaniline, 4-	µg/kg							
Chloronaphthalene, 2-	µg/kg				<390			
Chlorophenol, 2-	µg/kg				<390			
Chlorophenyl Phenyl Ether, 4-	µg/kg				<390			
Chrysene	µg/kg				<390 N1			
Cresol, 2-	µg/kg							
Cresol, 3-	µg/kg							
Cresol, 4-	µg/kg							
Di-n-butyl Phthalate	µg/kg				1000			
Di-n-octyl Phthalate	µg/kg				<390			
Dibenzo[a,h]anthracene	µg/kg				<390			
Dibenzofuran	µg/kg							
Dichlorobenzidine, 3,3'-	µg/kg				<390			

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Dichlorophenol,2,4-	µg/kg				<390			
Diethyl Phthalate	µg/kg				<390			
Dimethyl Phthalate	µg/kg				<390			
Dimethylaminoazobenzene,4-	µg/kg							
Dimethylbenzidine,3,3'-	µg/kg							
Dimethylbenzo[a]anthracene,7,12-	µg/kg							
Dimethylphenethylamine,α,α-	µg/kg							
Dimethylphenol,2,4-	µg/kg				<390			
Dinitro-o-cresol,4,6-	µg/kg				<390			
Dinitrobenzene,1,3-	µg/kg							
Dinitrophenol,2,4-	µg/kg				<390			
Dinitrotoluene,2,4-	µg/kg				<390			
Dinitrotoluene,2,6-	µg/kg				<390			
Diphenylamine	µg/kg							
Diphenylhydrazine,1,2-	µg/kg				<390			
Ethyl Methanesulfonate	µg/kg							
Fluoranthene	µg/kg				<390 N1			
Fluorene	µg/kg				<390			
Hexachlorobenzene	µg/kg				<390			
Hexachlorobutadiene	µg/kg				<390			
Hexachlorocyclopentadiene	µg/kg				<390			
Hexachloroethane	µg/kg				<390			
Hexachlorophene	µg/kg							
Hexachloropropylene	µg/kg							
Indeno(1,2,3-cd)pyrene	µg/kg				<390 N1			
Isophorone	µg/kg				<390			
Isosafrole	µg/kg							
Methapyrilene	µg/kg							

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Methyl Methanesulfonate	µg/kg							
Methylcholanthrene,3-	µg/kg							
Methylnaphthalene,2-	µg/kg							
N-nitroso-di-n-butylamine	µg/kg							
N-nitroso-n-propylamine	µg/kg				<390			
N-nitrosodiethylamine	µg/kg							
N-nitrosodimethylamine	µg/kg				<390			
N-nitrosodiphenylamine	µg/kg				<390			
N-nitrosomethylethylamine	µg/kg							
N-nitrosomorpholine	µg/kg							
N-nitrosopiperidine	µg/kg							
Naphthalene	µg/kg				<390			
Naphthoquinone,1,4-	µg/kg							
Naphthylamine,alpha-	µg/kg							
Naphthylamine,beta-	µg/kg							
Nitro-o-toluidine,5-	µg/kg							
Nitroaniline,2-	µg/kg							
Nitroaniline,3-	µg/kg							
Nitroaniline,4-	µg/kg							
Nitrobenzene	µg/kg				<390			
Nitrophenol,2-	µg/kg				<390			
Nitrophenol,4-	µg/kg				<390			
Nitroquinoline-1-oxide,4-	µg/kg							
Nitrosopyrrolidine,n-	µg/kg							
Pentachlorophenol	µg/kg				<390			
Phenacetin	µg/kg							
Phenanthrene	µg/kg				<390 N1			
Phenol	µg/kg				<390			

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg							
Picoline, 2-	µg/kg							
Pronamide	µg/kg							
Propane), 2,2'-oxybis(1-chloro-	µg/kg							
Propane), 2,2'-oxybis(2-chloro-	µg/kg				<390			
Pyrene	µg/kg				<390 N1			
Pyridine	µg/kg							
Safrole	µg/kg							
Tetrachlorobenzene, 1,2,4,5-	µg/kg							
Tetrachlorophenol, 2,3,4,6-	µg/kg							
Toluidine, o-	µg/kg							
Trichlorobenzene, 1,2,4-	µg/kg				<390			
Trichlorophenol, 2,4,5-	µg/kg							
Trichlorophenol, 2,4,6-	µg/kg				<390			
Triethyl Phosphorothioate, o,o,o-	µg/kg							
Trinitrobenzene, 1,3,5-	µg/kg							
Acetone	µg/kg				<30			<27
Acrolein	µg/kg				<15			<13
Acrylonitrile	µg/kg				<15			<13
Benzene	µg/kg				<6.0			<5.3
Benzene (mobile)	µg/kg	<8	<8	<8		<8	<8	
Bromobenzene	µg/kg				<6.0			<5.3
Bromoform	µg/kg				<6.0			<5.3
Carbon Disulfide	µg/kg				<6.0			<5.3
Carbon Tetrachloride	µg/kg				<6.0			<5.3
Chlorobenzene	µg/kg				<6.0			<5.3
Chlorodibromomethane	µg/kg				<6.0			<5.3
Chloroethane	µg/kg				<6.0			<5.3

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-261	NK-SB-261	NK-SB-261	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262
	Sample ID	1027043	1027044	1027045	1027046	1027046	1027047	1027048
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	11:19	11:30	11:35	13:50	13:50	13:55	14:10
	Sample Depth	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	AEL
	Lab. Number	97-1863-363	97-1864-364	97-1865-365	AEL97003103	97-1866-366	97-1867-367	AEL97003104
Constituent	Units							
Chloroethyl Vinyl Ether, 2-	µg/kg				<6.0			<5.3
Chloroform	µg/kg				<6.0			<5.3
Chlorotoluene, o-	µg/kg				<6.0			<5.3
Chlorotoluene, p-	µg/kg				<6.0			<5.3
Dibromomethane	µg/kg				<6.0			<5.3
Dichlorobenzene, 1,2-	µg/kg				<6.0			<5.3
Dichlorobenzene, 1,3-	µg/kg				<6.0			<5.3
Dichlorobenzene, 1,4-	µg/kg				<6.0			<5.3
Dichlorobromomethane	µg/kg				<6.0			<5.3
Dichlorodifluoromethane	µg/kg				<6.0			<5.3
Dichloroethane, 1,1-	µg/kg				<6.0			<5.3
Dichloroethane, 1,2-	µg/kg				<6.0			<5.3
Dichloroethylene, 1,1-	µg/kg				<6.0			<5.3
Dichloroethylene, 1,2-cis-	µg/kg				<6.0			<5.3
Dichloroethylene, 1,2-trans-	µg/kg				<6.0			<5.3
Dichloropropane, 1,2-	µg/kg				<6.0			<5.3
Dichloropropylene, 1,3-cis-	µg/kg				<6.0			<5.3
Dichloropropylene, 1,3-trans-	µg/kg				<6.0			<5.3
Ethylbenzene	µg/kg				<6.0			<5.3
Ethylbenzene (mobile)	µg/kg	<17	<17	<17		<17	<17	
Hexanone, 2-	µg/kg				<15			<13
Methyl Bromide	µg/kg				<6.0			<5.3
Methyl Chloride	µg/kg				<6.0			<5.3
Methyl Ethyl Ketone	µg/kg				<15			<13
Methyl-2-pentanone, 4-	µg/kg				<15			<13
Methyl-tert-butyl Ether	µg/kg				<6.0			<5.3
Methylene Chloride	µg/kg				<11			<11
Pentachlorobenzene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Date Metals Analyzed	-					03/18/1997		
Date Organics Analyzed	-	03/10/1997	03/10/1997	03/10/1997	03/10/1997	03/20/1997	03/10/1997	03/10/1997
Date Semi-volatile Organics Analyzed	-					04/04/1997		
Dinoseb	µg/kg							
Arsenic	mg/kg					<0.47		
Barium	mg/kg					10		
Cadmium	mg/kg					<3.5		
Chromium	mg/kg					<5.83		
Lead	mg/kg					<23.3		
Mercury	mg/kg					<0.09		
Nickel	mg/kg					<11.7		
Selenium	mg/kg					<1.17		
Silver	mg/kg					<5.83		
Zinc	mg/kg					22.5		
Acetylaminofluorene,2-	µg/kg							
Aramite	µg/kg							
Dimethoate	µg/kg							
Disulfoton	µg/kg							
Famphur	µg/kg							
Phorate	µg/kg							
Total Petroleum Hydrocarbons	mg/kg					<39.6		
Acenaphthene	µg/kg					<390		
Acenaphthylene	µg/kg					<390		
Acetophenone	µg/kg							
Aminobiphenyl,4-	µg/kg							
Aniline	µg/kg							
Anthracene	µg/kg					<390		
Benzidine	µg/kg					<390		

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Benzo[a]anthracene	µg/kg					<390		
Benzo[a]pyrene	µg/kg					<390		
Benzo[b]fluoranthene	µg/kg					<390		
Benzo[ghi]perylene	µg/kg					<390		
Benzo[k]fluoranthene	µg/kg					<390		
Benzoic Acid	µg/kg							
Benzyl Alcohol	µg/kg							
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg					<390		
Bis(2-chloroethyl) Ether	µg/kg					<390		
Bis(2-ethylhexyl) Phthalate	µg/kg					<390		
Bromophenyl Phenyl Ether, 4-	µg/kg					<390		
Butyl Benzyl Phthalate	µg/kg					<390		
Carbazole	µg/kg							
Chloro-m-cresol, p-	µg/kg							
Chloroaniline, 4-	µg/kg							
Chloronaphthalene, 2-	µg/kg					<390		
Chlorophenol, 2-	µg/kg					<390		
Chlorophenyl Phenyl Ether, 4-	µg/kg					<390		
Chrysene	µg/kg					<390		
Cresol, 2-	µg/kg							
Cresol, 3-	µg/kg							
Cresol, 4-	µg/kg							
Di-n-butyl Phthalate	µg/kg					720		
Di-n-octyl Phthalate	µg/kg					<390		
Dibenzo[a,h]anthracene	µg/kg					<390		
Dibenzofuran	µg/kg							
Dichlorobenzidine, 3,3'-	µg/kg					<390		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Dichlorophenol,2,4-	µg/kg					<390		
Diethyl Phthalate	µg/kg					<390		
Dimethyl Phthalate	µg/kg					<390		
Dimethylaminoazobenzene,4-	µg/kg							
Dimethylbenzidine,3,3'-	µg/kg							
Dimethylbenzo[a]anthracene,7,12-	µg/kg							
Dimethylphenethylamine,alpha,alpha-	µg/kg							
Dimethylphenol,2,4-	µg/kg					<390		
Dinitro-o-cresol,4,6-	µg/kg					<390		
Dinitrobenzene,1,3-	µg/kg							
Dinitrophenol,2,4-	µg/kg					<390		
Dinitrotoluene,2,4-	µg/kg					<390		
Dinitrotoluene,2,6-	µg/kg					<390		
Diphenylamine	µg/kg							
Diphenylhydrazine,1,2-	µg/kg					<390		
Ethyl Methanesulfonate	µg/kg							
Fluoranthene	µg/kg					<390		
Fluorene	µg/kg					<390		
Hexachlorobenzene	µg/kg					<390		
Hexachlorobutadiene	µg/kg					<390		
Hexachlorocyclopentadiene	µg/kg					<390		
Hexachloroethane	µg/kg					<390		
Hexachlorophene	µg/kg							
Hexachloropropylene	µg/kg							
Indeno(1,2,3-cd)pyrene	µg/kg					<390		
Isophorone	µg/kg					<390		
Isosafrole	µg/kg							
Methapyrilene	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Methyl Methanesulfonate	µg/kg							
Methylcholanthrene,3-	µg/kg							
Methylnaphthalene,2-	µg/kg							
N-nitroso-di-n-butylamine	µg/kg							
N-nitroso-n-propylamine	µg/kg					<390		
N-nitrosodiethylamine	µg/kg							
N-nitrosodimethylamine	µg/kg					<390		
N-nitrosodiphenylamine	µg/kg					<390		
N-nitrosomethylethylamine	µg/kg							
N-nitrosomorpholine	µg/kg							
N-nitrosopiperidine	µg/kg							
Naphthalene	µg/kg					<390		
Naphthoquinone,1,4-	µg/kg							
Naphthylamine,alpha-	µg/kg							
Naphthylamine,beta-	µg/kg							
Nitro-o-toluidine,5-	µg/kg							
Nitroaniline,2-	µg/kg							
Nitroaniline,3-	µg/kg							
Nitroaniline,4-	µg/kg							
Nitrobenzene	µg/kg					<390		
Nitrophenol,2-	µg/kg					<390		
Nitrophenol,4-	µg/kg					<390		
Nitroquinoline-1-oxide,4-	µg/kg							
Nitrosopyrrolidine,n-	µg/kg							
Pentachlorophenol	µg/kg					<390		
Phenacetin	µg/kg							
Phenanthrene	µg/kg					<390		
Phenol	µg/kg					<390		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Phenylenediamine,1,4-	µg/kg							
Picoline,2-	µg/kg							
Pronamide	µg/kg							
Propane),2,2'-oxybis(1-chloro-	µg/kg							
Propane),2,2'-oxybis(2-chloro-	µg/kg					<390		
Pyrene	µg/kg					<390		
Pyridine	µg/kg							
Saffrole	µg/kg							
Tetrachlorobenzene,1,2,4,5-	µg/kg							
Tetrachlorophenol,2,3,4,6-	µg/kg							
Toluidine,o-	µg/kg							
Trichlorobenzene,1,2,4-	µg/kg					<390		
Trichlorophenol,2,4,5-	µg/kg							
Trichlorophenol,2,4,6-	µg/kg					<390		
Triethyl Phosphorothioate,o,o,o-	µg/kg							
Trinitrobenzene,1,3,5-	µg/kg							
Acetone	µg/kg					<26		
Acrolein	µg/kg					<13		
Acrylonitrile	µg/kg					<13		
Benzene	µg/kg					<5.3		
Benzene (mobile)	µg/kg	<8	<8	<7	<8		<8	<8
Bromobenzene	µg/kg					<5.3		
Bromoform	µg/kg					<5.3		
Carbon Disulfide	µg/kg					<5.3		
Carbon Tetrachloride	µg/kg					<5.3		
Chlorobenzene	µg/kg					<5.3		
Chlorodibromomethane	µg/kg					<5.3		
Chloroethane	µg/kg					<5.3		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-262	NK-SB-263	NK-SB-263	NK-SB-263
	Sample ID	1027048	1027049	1027050	1027051	1027052	1027052	1027053
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997
	Sample Time	14:10	14:15	14:30	14:35	15:45	15:45	15:50
	Sample Depth	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	0' - 2'	2' - 4'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	97-1868-368	97-1869-369	97-1870-370	97-1871-371	AEL97003105	97-1872-372	97-1873-373
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg					<5.3		
Chloroform	µg/kg					<5.3		
Chlorotoluene,o-	µg/kg					<5.3		
Chlorotoluene,p-	µg/kg					<5.3		
Dibromomethane	µg/kg					<5.3		
Dichlorobenzene,1,2-	µg/kg					<5.3		
Dichlorobenzene,1,3-	µg/kg					<5.3		
Dichlorobenzene,1,4-	µg/kg					<5.3		
Dichlorobromomethane	µg/kg					<5.3		
Dichlorodifluoromethane	µg/kg					<5.3		
Dichloroethane,1,1-	µg/kg					<5.3		
Dichloroethane,1,2-	µg/kg					<5.3		
Dichloroethylene,1,1-	µg/kg					<5.3		
Dichloroethylene,1,2-cis-	µg/kg					<5.3		
Dichloroethylene,1,2-trans-	µg/kg					<5.3		
Dichloropropane,1,2-	µg/kg					<5.3		
Dichloropropylene,1,3-cis-	µg/kg					<5.3		
Dichloropropylene,1,3-trans-	µg/kg					<5.3		
Ethylbenzene	µg/kg					<5.3		
Ethylbenzene (mobile)	µg/kg	<17	<17	<14	<18		<17	<17
Hexanone,2-	µg/kg					<13		
Methyl Bromide	µg/kg					<5.3		
Methyl Chloride	µg/kg					<5.3		
Methyl Ethyl Ketone	µg/kg					<13		
Methyl-2-pentanone,4-	µg/kg					<13		
Methyl-tert-butyl Ether	µg/kg					<5.3		
Methylene Chloride	µg/kg					<11		
Pentachlorobenzene	µg/kg							

Notes: 1. Printed on 03/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Date Metals Analyzed	-	03/18/1997						
Date Organics Analyzed	-	03/20/1997	03/10/1997	03/10/1997	03/10/1997	03/10/1997		
Date Semi-volatile Organics Analyzed	-						06/06/1997	06/06/1997
Dinoseb	µg/kg						<420 U	<390 U
Arsenic	mg/kg	<0.44						
Barium	mg/kg	8.95						
Cadmium	mg/kg	<3.31						
Chromium	mg/kg	<5.52						
Lead	mg/kg	<22.1						
Mercury	mg/kg	<0.09						
Nickel	mg/kg	<11						
Selenium	mg/kg	<1.1						
Silver	mg/kg	<5.52						
Zinc	mg/kg	13.5						
Acetylaminofluorene,2-	µg/kg						<420 U	<390 U
Aramite	µg/kg						<420 U	<390 U
Dimethoate	µg/kg						<420 U	<390 U
Disulfoton	µg/kg						<420 U	<390 U
Famphur	µg/kg						<420 U j	<390 U j
Phorate	µg/kg						<420 U	<390 U
Total Petroleum Hydrocarbons	mg/kg	<38.9						
Acenaphthene	µg/kg						<420 U	<390 U
Acenaphthylene	µg/kg						<420 U	<390 U
Acetophenone	µg/kg						<420 U	<390 U
Aminobiphenyl,4-	µg/kg						<420 U	<390 U
Aniline	µg/kg						<420 U	<390 U
Anthracene	µg/kg						<420 U	<390 U
Benzidine	µg/kg							

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Benzo[a]anthracene	µg/kg						<420 U	<390 U
Benzo[a]pyrene	µg/kg						<420 U	<390 U
Benzo[b]fluoranthene	µg/kg						<420 U	<390 U
Benzo[ghi]perylene	µg/kg						<420 U	<390 U
Benzo[k]fluoranthene	µg/kg						<420 U	<390 U
Benzoic Acid	µg/kg						<420 U j	<390 U j
Benzyl Alcohol	µg/kg						<840 U	<800 U
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg						<420 U	<390 U
Bis(2-chloroethyl) Ether	µg/kg						<420 U	<390 U
Bis(2-ethylhexyl) Phthalate	µg/kg						<420 U	<390 U
Bromophenyl Phenyl Ether, 4-	µg/kg						<420 U	<390 U
Butyl Benzyl Phthalate	µg/kg						<420 U	<390 U
Carbazole	µg/kg						<420 U	<390 U
Chloro-m-cresol, p-	µg/kg						<840 U	<800 U
Chloroaniline, 4-	µg/kg						<420 U	<390 U
Chloronaphthalene, 2-	µg/kg						<420 U	<390 U
Chlorophenol, 2-	µg/kg						<420 U	<390 U
Chlorophenyl Phenyl Ether, 4-	µg/kg						<420 U	<390 U
Chrysene	µg/kg						<420 U	<390 U
Cresol, 2-	µg/kg						<420 U	<390 U
Cresol, 3-	µg/kg						<420 U	<390 U
Cresol, 4-	µg/kg						<420 U	<390 U
Di-n-butyl Phthalate	µg/kg						<420 U	<390 U
Di-n-octyl Phthalate	µg/kg						<420 U	<390 U
Dibenzo[a,h]anthracene	µg/kg						<420 U	<390 U
Dibenzofuran	µg/kg						<420 U	<390 U
Dichlorobenzidine, 3,3'-	µg/kg						<840 U	<800 U

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Dichlorophenol,2,4-	µg/kg						<420 U	<390 U
Diethyl Phthalate	µg/kg						<420 U	<390 U
Dimethyl Phthalate	µg/kg						<420 U	<390 U
Dimethylaminoazobenzene,4-	µg/kg						<420 U	<390 U
Dimethylbenzidine,3,3'-	µg/kg						<420 U	<390 U
Dimethylbenzo[a]anthracene,7,12-	µg/kg						<420 U	<390 U
Dimethylphenethylamine, alpha, alpha-	µg/kg						<420 U	<390 U
Dimethylphenol,2,4-	µg/kg						<420 U	<390 U
Dinitro-o-cresol,4,6-	µg/kg						<1000 U	<990 U
Dinitrobenzene,1,3-	µg/kg						<420 U	<390 U
Dinitrophenol,2,4-	µg/kg						<1000 U	<990 U
Dinitrotoluene,2,4-	µg/kg						<420 U	<390 U
Dinitrotoluene,2,6-	µg/kg						<420 U	<390 U
Diphenylamine	µg/kg						<420 U	<390 U
Diphenylhydrazine,1,2-	µg/kg							
Ethyl Methanesulfonate	µg/kg						<420 U	<390 U
Fluoranthene	µg/kg						<420 U	<390 U
Fluorene	µg/kg						<420 U	<390 U
Hexachlorobenzene	µg/kg						<420 U	<390 U
Hexachlorobutadiene	µg/kg						<420 U	<390 U
Hexachlorocyclopentadiene	µg/kg						<420 U	<390 U
Hexachloroethane	µg/kg						<420 U	<390 U
Hexachlorophene	µg/kg						<420 U	<390 U
Hexachloropropylene	µg/kg						<420 U	<390 U
Indeno(1,2,3-cd)pyrene	µg/kg						<420 U	<390 U
Isophorone	µg/kg						<420 U	<390 U
Isosafrole	µg/kg						<420 U	<390 U
Methapyrilene	µg/kg						<420 U	<390 U

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Methyl Methanesulfonate	µg/kg						<420 U	<390 U
Methylcholanthrene,3-	µg/kg						<830 U	<790 U
Methylnaphthalene,2-	µg/kg						<420 U	<390 U
N-nitroso-di-n-butylamine	µg/kg						<420 U	<390 U
N-nitroso-n-propylamine	µg/kg						<420 U	<390 U
N-nitrosodiethylamine	µg/kg						<420 U	<390 U
N-nitrosodimethylamine	µg/kg						<420 U	<390 U
N-nitrosodiphenylamine	µg/kg						<420 U	<390 U
N-nitrosomethylethylamine	µg/kg						<420 U	<390 U
N-nitrosomorpholine	µg/kg						<420 U	<390 U
N-nitrosopiperidine	µg/kg						<420 U	<390 U
Naphthalene	µg/kg						<420 U	<390 U
Naphthoquinone,1,4-	µg/kg						<420 U	<390 U
Naphthylamine,alpha-	µg/kg						<420 U	<390 U
Naphthylamine,beta-	µg/kg						<420 U	<390 U
Nitro-o-toluidine,5-	µg/kg						<420 U	<390 U
Nitroaniline,2-	µg/kg						<1000 U	<990 U
Nitroaniline,3-	µg/kg						<1000 U	<990 U
Nitroaniline,4-	µg/kg						<1000 U	<990 U
Nitrobenzene	µg/kg						<420 U	<390 U
Nitrophenol,2-	µg/kg						<420 U	<390 U
Nitrophenol,4-	µg/kg						<1000 U	<990 U
Nitroquinoline-1-oxide,4-	µg/kg						<420 U	<390 U
Nitrosopyrrolidine,n-	µg/kg						<420 U	<390 U
Pentachlorophenol	µg/kg						<1000 U	<990 U
Phenacetin	µg/kg						<420 U	<390 U
Phenanthrene	µg/kg						<420 U	<390 U
Phenol	µg/kg						<420 U	<390 U

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg						<420 U	<390 U
Picoline, 2-	µg/kg						<420 U	<390 U
Pronamide	µg/kg						<420 U	<390 U
Propane), 2,2'-oxybis(1-chloro-	µg/kg						<420 U	<390 U
Propane), 2,2'-oxybis(2-chloro-	µg/kg							
Pyrene	µg/kg						<420 U	<390 U
Pyridine	µg/kg						<420 U	<390 U
Saftrole	µg/kg						<420 U	<390 U
Tetrachlorobenzene, 1,2,4,5-	µg/kg						<420 U	<390 U
Tetrachlorophenol, 2,3,4,6-	µg/kg						<420 U	<390 U
Toluidine, o-	µg/kg						<420 U	<390 U
Trichlorobenzene, 1,2,4-	µg/kg						<420 U	<390 U
Trichlorophenol, 2,4,5-	µg/kg						<420 U	<390 U
Trichlorophenol, 2,4,6-	µg/kg						<420 U	<390 U
Triethyl Phosphorothioate, o,o,o-	µg/kg						<420 U	<390 U
Trinitrobenzene, 1,3,5-	µg/kg						<420 U _r	<390 U
Acetone	µg/kg	<26						
Acrolein	µg/kg	<13						
Acrylonitrile	µg/kg	<13						
Benzene	µg/kg	<5.1						
Benzene (mobile)	µg/kg		<8	<8	<8	<8		
Bromobenzene	µg/kg	<5.1						
Bromoform	µg/kg	<5.1						
Carbon Disulfide	µg/kg	<5.1						
Carbon Tetrachloride	µg/kg	<5.1						
Chlorobenzene	µg/kg	<5.1						
Chlorodibromomethane	µg/kg	<5.1						
Chloroethane	µg/kg	<5.1						

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-263	NK-SB-293	NK-SB-293
	Sample ID	1027054	1027054	1027055	1027056	1027057	1634105	1634106
	Sample Date	03/06/1997	03/06/1997	03/06/1997	03/06/1997	03/06/1997	05/22/1997	05/22/1997
	Sample Time	15:55	15:55	15:59	16:02	16:05	13:00	13:05
	Sample Depth	4' - 6'	4' - 6'	6' - 8'	8' - 10'	10' - 12'	0' - 2'	2' - 4'
	Laboratory	AEL	LEA	LEA	LEA	LEA	QUAN	QUAN
	Lab. Number	AEL97003106	97-1874-374	97-1876-379	97-1877-380	97-1878-381	A7E270119002	A7E270119003
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg	<5.1						
Chloroform	µg/kg	<5.1						
Chlorotoluene,o-	µg/kg	<5.1						
Chlorotoluene,p-	µg/kg	<5.1						
Dibromomethane	µg/kg	<5.1						
Dichlorobenzene,1,2-	µg/kg	<5.1					<420 U	<390 U
Dichlorobenzene,1,3-	µg/kg	<5.1					<420 U	<390 U
Dichlorobenzene,1,4-	µg/kg	<5.1					<420 U	<390 U
Dichlorobromomethane	µg/kg	<5.1						
Dichlorodifluoromethane	µg/kg	<5.1						
Dichloroethane,1,1-	µg/kg	<5.1						
Dichloroethane,1,2-	µg/kg	<5.1						
Dichloroethylene,1,1-	µg/kg	<5.1						
Dichloroethylene,1,2-cis-	µg/kg	<5.1						
Dichloroethylene,1,2-trans-	µg/kg	<5.1						
Dichloropropane,1,2-	µg/kg	<5.1						
Dichloropropylene,1,3-cis-	µg/kg	<5.1						
Dichloropropylene,1,3-trans-	µg/kg	<5.1						
Ethylbenzene	µg/kg	<5.1						
Ethylbenzene (mobile)	µg/kg		<17	<17	<17	<17		
Hexanone,2-	µg/kg	<13						
Methyl Bromide	µg/kg	<5.1						
Methyl Chloride	µg/kg	<5.1						
Methyl Ethyl Ketone	µg/kg	<13						
Methyl-2-pentanone,4-	µg/kg	<13						
Methyl-tert-butyl Ether	µg/kg	<5.1						
Methylene Chloride	µg/kg	<7.7						
Pentachlorobenzene	µg/kg						<420 U	<390 U

Notes: 1. Printed on 03/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-							
Date Semi-volatile Organics Analyzed	-	06/06/1997	06/06/1997	06/05/1997	06/05/1997	06/05/1997	06/05/1997	06/05/1997
Dinoseb	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Arsenic	mg/kg							
Barium	mg/kg							
Cadmium	mg/kg							
Chromium	mg/kg							
Lead	mg/kg							
Mercury	mg/kg							
Nickel	mg/kg							
Selenium	mg/kg							
Silver	mg/kg							
Zinc	mg/kg							
Acetylaminofluorene,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Aramite	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethoate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Disulfoton	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Famphur	µg/kg	<390 U j	<380 U j	<380 U j	<410 U j	<390 U j	<410 U j	<420 U j
Phorate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Total Petroleum Hydrocarbons	mg/kg							
Acenaphthene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Acenaphthylene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Acetophenone	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Aminobiphenyl,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Aniline	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Anthracene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzidine	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Benzo[a]anthracene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzo[a]pyrene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzo[b]fluoranthene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzo[ghi]perylene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzo[k]fluoranthene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Benzoic Acid	µg/kg	<390 U j	<380 U j	<380 U	<410 U	<390 U	<410 U	<420 U
Benzyl Alcohol	µg/kg	<800 U	<770 U	<780 U	<820 U	<800 U	<830 U	<860 U
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Bis(2-chloroethyl) Ether	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Bis(2-ethylhexyl) Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Bromophenyl Phenyl Ether,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Butyl Benzyl Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Carbazole	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Chloro-m-cresol,p-	µg/kg	<800 U	<770 U	<780 U	<820 U	<800 U	<830 U	<860 U
Chloroaniline,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Chloronaphthalene,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Chlorophenol,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Chlorophenyl Phenyl Ether,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Chrysene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Cresol,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Cresol,3-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Cresol,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Di-n-butyl Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Di-n-octyl Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dibenzo[a,h]anthracene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dibenzofuran	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dichlorobenzidine,3,3'-	µg/kg	<800 U	<770 U	<780 U	<820 U	<800 U	<830 U	<860 U

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Dichlorophenol,2,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Diethyl Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethyl Phthalate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethylaminoazobenzene,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethylbenzidine,3,3'-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethylbenzo[a]anthracene,7,12-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethylphenethylamine,alpha,alpha-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dimethylphenol,2,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dinitro-o-cresol,4,6-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Dinitrobenzene,1,3-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dinitrophenol,2,4-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Dinitrotoluene,2,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dinitrotoluene,2,6-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Diphenylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Diphenylhydrazine,1,2-	µg/kg							
Ethyl Methanesulfonate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Fluoranthene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Fluorene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachlorobenzene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachlorobutadiene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachlorocyclopentadiene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachloroethane	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachlorophene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Hexachloropropylene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Indeno(1,2,3-cd)pyrene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Isophorone	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Isosafrole	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Methapyrilene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Methyl Methanesulfonate	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Methylcholanthrene,3-	µg/kg	<790 U	<760 U	<760 U	<810 U	<790 U	<820 U	<850 U
Methylnaphthalene,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitroso-di-n-butylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitroso-n-propylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosodiethylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosodimethylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosodiphenylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosomethylethylamine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosomorpholine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
N-nitrosopiperidine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Naphthalene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Naphthoquinone,1,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Naphthylamine,alpha-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Naphthylamine,beta-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Nitro-o-toluidine,5-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Nitroaniline,2-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Nitroaniline,3-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Nitroaniline,4-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Nitrobenzene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Nitrophenol,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Nitrophenol,4-	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Nitroquinoline-1-oxide,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Nitrosopyrrolidine,n-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Pentachlorophenol	µg/kg	<990 U	<960 U	<960 U	<1000 U	<990 U	<1000 U	<1100 U
Phenacetin	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Phenanthrene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Phenol	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Picoline, 2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Pronamide	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Propane), 2,2'-oxybis(1-chloro-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Propane), 2,2'-oxybis(2-chloro-	µg/kg							
Pyrene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Pyridine	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Safrole	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Tetrachlorobenzene, 1,2,4,5-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Tetrachlorophenol, 2,3,4,6-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Toluidine, o-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Trichlorobenzene, 1,2,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Trichlorophenol, 2,4,5-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Trichlorophenol, 2,4,6-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Triethyl Phosphorothioate, o,o,o-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Trinitrobenzene, 1,3,5-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Acetone	µg/kg							
Acrolein	µg/kg							
Acrylonitrile	µg/kg							
Benzene	µg/kg							
Benzene (mobile)	µg/kg							
Bromobenzene	µg/kg							
Bromoform	µg/kg							
Carbon Disulfide	µg/kg							
Carbon Tetrachloride	µg/kg							
Chlorobenzene	µg/kg							
Chlorodibromomethane	µg/kg							
Chloroethane	µg/kg							

Notes: 1. Printed on 05/05/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-294	NK-SB-294	NK-SB-295	NK-SB-295	NK-SB-296	NK-SB-296	NK-SB-297
	Sample ID	1634107	1634108	1634092	1634093	1634094	1634095	1634096
	Sample Date	05/22/1997	05/22/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997	05/20/1997
	Sample Time	13:30	13:35	12:15	12:20	12:40	12:40	13:00
	Sample Depth	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'	0' - 2'
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN	QUAN
	Lab. Number	A7E270119004	A7E270119005	A7E220184001	A7E220184002	A7E220184003	A7E220184004	A7E220184005
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg							
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							
Dibromomethane	µg/kg							
Dichlorobenzene,1,2-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dichlorobenzene,1,3-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dichlorobenzene,1,4-	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U
Dichlorobromomethane	µg/kg							
Dichlorodifluoromethane	µg/kg							
Dichloroethane,1,1-	µg/kg							
Dichloroethane,1,2-	µg/kg							
Dichloroethylene,1,1-	µg/kg							
Dichloroethylene,1,2-cis-	µg/kg							
Dichloroethylene,1,2-trans-	µg/kg							
Dichloropropane,1,2-	µg/kg							
Dichloropropylene,1,3-cis-	µg/kg							
Dichloropropylene,1,3-trans-	µg/kg							
Ethylbenzene	µg/kg							
Ethylbenzene (mobile)	µg/kg							
Hexanone,2-	µg/kg							
Methyl Bromide	µg/kg							
Methyl Chloride	µg/kg							
Methyl Ethyl Ketone	µg/kg							
Methyl-2-pentanone,4-	µg/kg							
Methyl-tert-butyl Ether	µg/kg							
Methylene Chloride	µg/kg							
Pentachlorobenzene	µg/kg	<390 U	<380 U	<380 U	<410 U	<390 U	<410 U	<420 U

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Notes: 1. Printed on 05/05/98

Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-							
Date Semi-volatile Organics Analyzed	-	06/04/1997	06/05/1997	06/04/1997	06/06/1997	06/06/1997		
Dinoseb	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Arsenic	mg/kg							
Barium	mg/kg							
Cadmium	mg/kg							
Chromium	mg/kg							
Lead	mg/kg							
Mercury	mg/kg							
Nickel	mg/kg							
Selenium	mg/kg							
Silver	mg/kg							
Zinc	mg/kg							
Acetylaminofluorene, 2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Aramite	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethoate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Disulfoton	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Famphur	µg/kg	<390 U j	<440 U j	<370 U j	<410 U j	<390 U j		
Phorate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Total Petroleum Hydrocarbons	mg/kg							
Acenaphthene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Acenaphthylene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Acetophenone	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Aminobiphenyl, 4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Aniline	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Anthracene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzidine	µg/kg							

Notes: 1. Printed on 05/03/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Benzo[a]anthracene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzo[a]pyrene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzo[b]fluoranthene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzo[ghi]perylene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzo[k]fluoranthene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Benzoic Acid	µg/kg	<390 U	<440 U	<370 U	<410 U j	<390 U j		
Benzyl Alcohol	µg/kg	<790 U	<900 U	<760 U	<830 U	<800 U		
Benzyl Butyl Phthalate	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Bis(2-chloroethyl) Ether	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Bis(2-ethylhexyl) Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Bromophenyl Phenyl Ether, 4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Butyl Benzyl Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Carbazole	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Chloro-m-cresol,p-	µg/kg	<790 U	<900 U	<760 U	<830 U	<800 U		
Chloroaniline, 4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Chloronaphthalene, 2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Chlorophenol, 2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Chlorophenyl Phenyl Ether, 4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Chrysene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Cresol, 2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Cresol, 3-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Cresol, 4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Di-n-butyl Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Di-n-octyl Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dibenzo[a,h]anthracene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dibenzofuran	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dichlorobenzidine, 3,3'-	µg/kg	<790 U	<900 U	<760 U	<830 U	<800 U		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Dichlorophenol,2,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Diethyl Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethyl Phthalate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethylaminoazobenzene,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethylbenzidine,3,3'-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethylbenzo[a]anthracene,7,12-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethylphenethylamine, alpha, alpha-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dimethylphenol,2,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dinitro-o-cresol,4,6-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Dinitrobenzene,1,3-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dinitrophenol,2,4-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Dinitrotoluene,2,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dinitrotoluene,2,6-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Diphenylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Diphenylhydrazine,1,2-	µg/kg							
Ethyl Methanesulfonate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Fluoranthene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Fluorene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachlorobenzene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachlorobutadiene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachlorocyclopentadiene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachloroethane	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachlorophene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Hexachloropropylene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Indeno(1,2,3-cd)pyrene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Isophorone	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Isosafrole	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Methapyrilene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Methyl Methanesulfonate	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Methylcholanthrene,3-	µg/kg	<780 U	<890 U	<750 U	<820 U	<780 U		
Methylnaphthalene,2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitroso-di-n-butylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitroso-n-propylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosodiethylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosodimethylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosodiphenylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosomethylethylamine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosomorpholine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
N-nitrosopiperidine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Naphthalene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Naphthoquinone,1,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Naphthylamine,alpha-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Naphthylamine,beta-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Nitro-o-toluidine,5-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Nitroaniline,2-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Nitroaniline,3-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Nitroaniline,4-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Nitrobenzene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Nitrophenol,2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Nitrophenol,4-	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Nitroquinoline-1-oxide,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Nitrosopyrrolidine,n-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Pentachlorophenol	µg/kg	<980 U	<1100 U	<940 U	<1000 U	<990 U		
Phenacetin	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Phenanthrene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Phenol	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Phenylenediamine, 1,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Picoline, 2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Pronamide	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Propane), 2,2'-oxybis(1-chloro-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Propane), 2,2'-oxybis(2-chloro-	µg/kg							
Pyrene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Pyridine	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Safrrole	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Tetrachlorobenzene, 1,2,4,5-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Tetrachlorophenol, 2,3,4,6-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Toluidine, o-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Trichlorobenzene, 1,2,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Trichlorophenol, 2,4,5-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Trichlorophenol, 2,4,6-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Triethyl Phosphorothioate, o, o, o-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Trinitrobenzene, 1,3,5-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Acetone	µg/kg							
Acrolein	µg/kg							
Acrylonitrile	µg/kg							
Benzene	µg/kg							
Benzene (mobile)	µg/kg							
Bromobenzene	µg/kg							
Bromoform	µg/kg							
Carbon Disulfide	µg/kg							
Carbon Tetrachloride	µg/kg							
Chlorobenzene	µg/kg							
Chlorodibromomethane	µg/kg							
Chloroethane	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-297	NK-SB-298	NK-SB-298	NK-SB-304	NK-SB-304		
	Sample ID	1634097	1634098	1634099	1634109	1634110		
	Sample Date	05/20/1997	05/20/1997	05/20/1997	05/22/1997	05/22/1997		
	Sample Time	13:00	13:30	13:40	13:50	13:55		
	Sample Depth	2' - 4'	0' - 2'	2' - 4'	0' - 2'	2' - 4'		
	Laboratory	QUAN	QUAN	QUAN	QUAN	QUAN		
	Lab. Number	A7E220184006	A7E220184007	A7E220184008	A7E270119006	A7E270119007		
Constituent	Units							
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg							
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							
Dibromomethane	µg/kg							
Dichlorobenzene,1,2-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dichlorobenzene,1,3-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dichlorobenzene,1,4-	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		
Dichlorobromomethane	µg/kg							
Dichlorodifluoromethane	µg/kg							
Dichloroethane,1,1-	µg/kg							
Dichloroethane,1,2-	µg/kg							
Dichloroethylene,1,1-	µg/kg							
Dichloroethylene,1,2-cis-	µg/kg							
Dichloroethylene,1,2-trans-	µg/kg							
Dichloropropane,1,2-	µg/kg							
Dichloropropylene,1,3-cis-	µg/kg							
Dichloropropylene,1,3-trans-	µg/kg							
Ethylbenzene	µg/kg							
Ethylbenzene (mobile)	µg/kg							
Hexanone,2-	µg/kg							
Methyl Bromide	µg/kg							
Methyl Chloride	µg/kg							
Methyl Ethyl Ketone	µg/kg							
Methyl-2-pentanone,4-	µg/kg							
Methyl-tert-butyl Ether	µg/kg							
Methylene Chloride	µg/kg							
Pentachlorobenzene	µg/kg	<390 U	<440 U	<370 U	<410 U	<390 U		

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Table 4
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-261	NK-SB-262	NK-SB-263			
	Sample ID	1027131	1027132	1027133	1027134			
	Sample Date	03/07/1997	03/07/1997	03/07/1997	03/07/1997			
	Sample Time	14:15	14:38	15:00	15:23			
	Sample Depth	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'			
	Laboratory	AEL	AEL	AEL	AEL			
	Lab. Number	AEL97002761	AEL97002762	AEL97002763	AEL97002764			
Constituent	Units							
Date Organics Analyzed	-	03/19/1997	03/20/1997	03/20/1997	03/20/1997			
Date Semi-volatile Organics Analyzed	-	04/02/1997	04/03/1997	04/03/1997	04/03/1997			
Total Petroleum Hydrocarbons	mg/L	<0.5	<0.5	<0.5	<0.5			
Acenaphthene	µg/L	<10	<10	<10	<10			
Acenaphthylene	µg/L	<1.6 MDL	<1.6 MDL	<1.6 MDL	<1.6 MDL			
Anthracene	µg/L	<10	<10	<10	<10			
Benzidine	µg/L	<10	<10	<10	<10			
Benzo[a]anthracene	µg/L	<0.82 MDL	<0.82 MDL	<0.82 MDL	<0.82 MDL			
Benzo[a]pyrene	µg/L	<0.37 MDL	<0.37 MDL	<0.37 MDL	<0.37 MDL			
Benzo[b]fluoranthene	µg/L	<0.51 MDL	<0.51 MDL	<0.51 MDL	<0.51 MDL			
Benzo[ghi]perylene	µg/L	<10	<10	<10	<10			
Benzo[k]fluoranthene	µg/L	<0.60 MDL	<0.60 MDL	<0.60 MDL	<0.60 MDL			
Bis(2-chloroethoxy)methane	µg/L	<10	<10	<10	<10			
Bis(2-chloroethyl) Ether	µg/L	<10	<10	<10	<10			
Bis(2-ethylhexyl)phthalate	µg/L	<1.3 MDL	<1.3 MDL	<1.3 MDL	<1.3 MDL			
Bromophenyl Phenyl Ether, 4-	µg/L	<10	<10	<10	<10			
Butyl Benzyl Phthalate	µg/L	<10	<10	<10	<10			
Chloronaphthalene, 2-	µg/L	<10	<10	<10	<10			
Chlorophenol, 2-	µg/L	<10	<10	<10	<10			
Chlorophenyl Phenyl Ether, 4-	µg/L	<10	<10	<10	<10			
Chrysene	µg/L	<10	<10	<10	<10			
Di-n-butyl Phthalate	µg/L	<10	<10	<10	<10			
Di-n-octyl Phthalate	µg/L	<10	<10	<10	<10			
Dibenzo[a,h]anthracene	µg/L	<10	<10	<10	<10			
Dichlorobenzidine, 3,3'-	µg/L	<10	<10	<10	<10			
Dichlorophenol, 2,4-	µg/L	<10	<10	<10	<10			
Diethyl Phthalate	µg/L	<10	<10	<10	<10			
Dimethyl Phthalate	µg/L	<10	<10	<10	<10			

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Table 4
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-261	NK-SB-262	NK-SB-263			
	Sample ID	1027131	1027132	1027133	1027134			
	Sample Date	03/07/1997	03/07/1997	03/07/1997	03/07/1997			
	Sample Time	14:15	14:38	15:00	15:23			
	Sample Depth	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'			
	Laboratory	AEL	AEL	AEL	AEL			
	Lab. Number	AEL97002761	AEL97002762	AEL97002763	AEL97002764			
Constituent	Units							
Dimethylphenol,2,4-	µg/L	<10	<10	<10	<10			
Dinitro-o-cresol,4,6-	µg/L	<10	<10	<10	<10			
Dinitrophenol,2,4-	µg/L	<10 UJ1	<10	<10	<10			
Dinitrotoluene,2,4-	µg/L	<10	<10	<10	<10			
Dinitrotoluene,2,6-	µg/L	<10	<10	<10	<10			
Diphenylhydrazine,1,2-	µg/L	<10	<10	<10	<10			
Fluoranthene	µg/L	<10	<10	<10	<10			
Fluorene	µg/L	<10	<10	<10	<10			
Hexachlorobenzene	µg/L	<1.2 MDL	<1.2 MDL	<1.2 MDL	<1.2 MDL			
Hexachlorobutadiene	µg/L	<10	<10	<10	<10			
Hexachlorocyclopentadiene	µg/L	<10	<10	<10	<10			
Hexachloroethane	µg/L	<1.2 MDL	<1.2 MDL	<1.2 MDL	<1.2 MDL			
Indeno(1,2,3-cd)pyrene	µg/L	<10	<10	<10	<10			
Isophorone	µg/L	<10	<10	<10	<10			
N-nitroso-n-propylamine	µg/L	<10	<10	<10	<10			
N-nitrosodimethylamine	µg/L	<10	<10	<10	<10			
N-nitrosodiphenylamine	µg/L	<10	<10	<10	<10			
Naphthalene	µg/L	<10	<10	<10	<10			
Nitrobenzene	µg/L	<10	<10	<10	<10			
Nitrophenol,2-	µg/L	<10	<10	<10	<10			
Nitrophenol,4-	µg/L	<10	<10	<10	<10			
Pentachlorophenol	µg/L	<0.63 MDL	<0.63 MDL	<0.63 MDL	<0.63 MDL			
Phenanthrene	µg/L	<1.1 MDL	<1.1 MDL	<1.1 MDL	<1.1 MDL			
Phenol	µg/L	<10	<10	<10	<10			
Propane),2,2'-oxybis(2-chloro-	µg/L	<10	<10	<10	<10			
Pyrene	µg/L	<10	<10	<10	<10			
Trichlorobenzene,1,2,4-	µg/L	<10	<10	<10	<10			
Trichlorophenol,2,4,6-	µg/L	<10	<10	<10	<10			

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Table 4
SUMMARY OF ANALYTICAL RESULTS - GROUNDWATER
P&W East Hartford: X-194 Aboveground Storage Tank

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	Location ID	NK-SB-260	NK-SB-261	NK-SB-262	NK-SB-263			
	Sample ID	1027131	1027132	1027133	1027134			
	Sample Date	03/07/1997	03/07/1997	03/07/1997	03/07/1997			
	Sample Time	14:15	14:38	15:00	15:23			
	Sample Depth	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'	6.0' - 7.0'			
	Laboratory	AEL	AEL	AEL	AEL			
	Lab. Number	AEL97002761	AEL97002762	AEL97002763	AEL97002764			
Constituent	Units							
Acetone	µg/L	<4.0	<4.0	<4.0	<4.0			
Acrolein	µg/L	<15	<15	<15	<15			
Acrylonitrile	µg/L	<0.65	<0.65	<0.65	<0.65			
Benzene	µg/L	<1.0	<1.0	<1.0	<1.0			
Bromobenzene	µg/L	<1.0	<1.0	<1.0	<1.0			
Bromoform	µg/L	<1.0	<1.0	<1.0	<1.0			
Carbon Disulfide	µg/L	<1.0	<1.0	<1.0	<1.0			
Carbon Tetrachloride	µg/L	<1.0	<1.0	<1.0	<1.0			
Chlorobenzene	µg/L	<1.0	<1.0	<1.0	<1.0			
Chlorodibromomethane	µg/L	<0.50	<0.50	<0.50	<0.50			
Chloroethane	µg/L	<1.0	<1.0	<1.0	<1.0			
Chloroethyl Vinyl Ether, 2-	µg/L	<1.0	<1.0	<1.0	<1.0			
Chloroform	µg/L	<1.0	<1.0	<1.0	<1.0			
Chlorotoluene, o-	µg/L	<1.0	<1.0	<1.0	<1.0			
Chlorotoluene, p-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dibromomethane	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichlorobenzene, 1,2-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichlorobenzene, 1,3-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichlorobenzene, 1,4-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichlorobromomethane	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichlorodifluoromethane	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloroethane, 1,1-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloroethane, 1,2-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloroethylene, 1,1-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloroethylene, 1,2-cis-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloroethylene, 1,2-trans-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloropropane, 1,2-	µg/L	<1.0	<1.0	<1.0	<1.0			
Dichloropropylene, 1,3-cis-	µg/L	<0.50	<0.50	<0.50	<0.50			

Notes: 1. Printed on 05/05/98

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DRAWINGS

**US EPA New England
RCRA Document Management System
Image Target Sheet**

RDMS Document ID # 2227

Facility Name: PRATT & WHITNEY (MAIN ST)

Facility ID#: CTD990672081

Phase Classification: R-5

Purpose of Target Sheet:

☒ **Oversized (in Site File)** ☐ **Oversized (in Map Drawer)**

☐ **Page(s) Missing (Please Specify Below)**

☐ **Privileged** ☐ **Other (Provide
Purpose Below)**

Description of Oversized Material, if applicable:

**SOIL INVESTIGATIONS - X-194 AREA ABOVEGROUND
STORAGE TANK LOCATION & CONSTITUENTS
DETECTED MAP- DRAWING 1**

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

*** Please Contact the EPA New England RCRA Records Center to View This Document ***

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Conductivities measured along the rear of the Maintenance and Storage Building indicated an anomaly. Based on the inspection of the building, it appeared that the anomaly was a septic tank for the building (Westinghouse 1990). This was the first instance that the location of the septic tank was documented. No other sampling activities were conducted concurrently with this incidental investigation.

July 1993 Investigation (Metcalf & Eddy):

what about locating leach field? any S&A?
if not state S&A S&AS = tank only not system

Description: In July 1993, Fuss & O'Neill, Inc. (F&O), working as a subcontractor for Metcalf & Eddy, Inc. (M&E), conducted a geophysical investigation to determine the location of the septic system. A Ground Penetrating Radar (GPR) survey was conducted and the septic tank was located. However, the leaching field was not located during the survey. M&E used a backhoe to excavate to the top of the septic tank and to remove the cover. A sludge sample, NK-SL-01, was collected from inside the tank on July 14, 1993 (M&E, 1993). This sample was analyzed for VOCs, metals (plus beryllium), and PCBs. A summary of the samples collected and analyses performed is included in Table 1.

Investigation Results: Concentrations of constituents detected in the septic tank sludge sample are presented in Table 4. A complete summary of sludge sample analytical results with detection limits is presented in Table 5. Acetone (ACT) was the only VOC detected in this sludge sample. Metals detected in the sludge sample included barium, lead, mercury, silver, and zinc. PCBs were not detected in this sample.

Data Evaluation and Conclusions: Based on the presence of ACT in the septic tank sludge sample, there is evidence that hazardous constituents may have been released to the septic system. Since only one sample was collected from within the septic tank and the leaching field was not located, additional investigation in the vicinity of the unit was warranted. No comparisons were made to the Connecticut Remediation Standard Regulation (RSR) for this sample, as there are no applicable criteria within the regulation for sludge samples.

August 1995 Investigation (Loureiro Engineering Associates):

how was it located?

Description: On August 8, 1995, one soil boring, NK-SB-03, was advanced within the approximate location of the leaching field by Loureiro Engineering Associates, P.C. (LEA). The sampling location is shown on Drawing 1. Soil samples were collected from the boring in continuous 2-foot intervals to a depth of 6 feet. In addition, another sample of the septic tank sludge (NK-SL-01) was collected on August 8, 1995.

A total of three soil samples from the soil boring were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs (benzene (BZ), ethylbenzene (EBZ), tetrachloroethylene (PCE), toluene (TL), 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and xylenes (XYL)). Based on visual, olfactory, or instrument evidence, and with consideration of the potential release mechanism, one sample from the soil boring was also submitted to Averill Environmental Laboratory, Inc. (AEL) for analysis. The sample was analyzed for the presence of VOCs, metals, and PCBs. The septic tank sludge sample was submitted to AEL and analyzed for the presence of VOCs, metals (without nickel and zinc), and PCBs. A summary of the samples collected and analyses performed is included in Table 1.

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Investigation Results: Based on the boring log, groundwater was encountered between 4 and 6 feet below the ground surface. No visual or olfactory evidence of contamination was noted in the boring log for boring NK-SB-03.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Detected concentrations at each soil sampling location are shown on Drawing 1. VOCs were not detected in the soil samples submitted to the LEA Analytical Laboratory or to AEL. PCBs were not detected in the soil sample submitted to AEL. Metals detected in the soil sample submitted to AEL included barium and chromium.

VOCs and PCBs were not detected in the septic tank sludge sample submitted to AEL. Metals detected in the sludge sample submitted to AEL included barium and mercury. Concentrations of constituents detected in septic tank sludge samples collected for this unit are presented in Table 4. A complete summary of sludge sample analytical results with detection limits is presented in Table 5.

Data Evaluation and Conclusions: The soil boring data were compared against the default numeric criteria included in the RSR and the site-wide background soil concentrations for various inorganic constituents (Fuss & O'Neill, 1994). For a more detailed discussion of background concentrations of metals in soil refer to *Technical Memorandum 4, Background Soil Data*. Criteria are established in the RSR based on exposure pathways for various environmental media, including soil and groundwater. The evaluation of the soils data is based on a comparison to the default numeric residential direct exposure criteria (RDEC), the industrial/commercial direct exposure criteria (IDEC), and the default numeric GB pollutant mobility criteria (GBPMC) included in the RSR.

Based on the analytical results for the soil samples from boring NK-SB-03 and the septic tank sludge sample NK-SL-01, there is no evidence that a release has occurred in the vicinity of this unit. The concentrations of the metals detected in the soil sample from boring NK-SB-03 are typical of background concentrations and are not indicative of a release from this unit. For the metals detected in soil, no exceedances of the default numeric RDEC or IDEC were noted. VOCs and PCBs were not detected in the soil sample collected and analyzed for this unit.

Based on the results of the laboratory analyses of soil samples collected and analyzed for this unit, there is no evidence that a release occurred from this unit. As a result, the area has been adequately characterized and no further action is warranted for this unit. No comparisons were made to the RSRs for the sludge sample, as there are no applicable criteria within the regulation for this type of media.

June 1997 Remediation (LEA):

Description: As part of the Septic System Removal Project conducted in the Airport/Klondike Area, the septic tank for the X-410 area was removed on April 8, 1997. The soil excavated with the tank removal was disposed of off the site as a non-hazardous waste. The excavation has been identified as test pit NK-TP-11. The location of the test pit is shown on Drawing 1. Any LEA screening here?

A total of four (sidewall) samples were collected from each of the four excavation sidewalls of NK-TP-11 on April 15, 1997. These soil samples were submitted to Environmental Science Services

Projects 17 or later must be included? -
Laboratory (ESS) for analysis. Due to data validation issues, analytical results from ESS were deemed (unusable) for the Airport/Klondike Project. Subsequent to these concerns, ESS analytical results have not be considered within this Unit Specific Technical Memorandum. *Yes*

The four confirmational sidewall samples were recollected from each of the four excavation sidewalls of NK-TP-11 on June 9, 1997. These soil samples were submitted to Quanterra Inc. (QNT) for analysis of VOCs by EPA Method 8260, metals, and TPH by EPA Method 418.1. A summary of samples collected and analyses performed are included in Table 1. *depth? T reported for VOC analyses*

Investigation Results: No visual or olfactory evidence of contamination was noted in the field paperwork. Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Detected concentrations at each sampling location are shown on Drawing 1. *ben either sample collection around 7*

VOCs and TPH were not detected in the soil samples submitted to QNT for analysis. One or more of the metals analyzed were detected in each of the soil samples submitted for analysis. These metals include arsenic, barium, chromium, lead, nickel, and zinc.

Data Evaluation and Conclusions: The soil data were compared against the default numeric criteria included in the RSRs and the site-specific background soil concentrations for various inorganic constituents for the North Klondike (Fuss & O'Neill, 1994). The concentrations of the metals detected in the soil samples are typical of background concentrations and are not indicative of a release from this unit. For the metals detected in soil, no exceedances of the default numeric RDEC or IDEC were noted.

VOCs and TPH were not detected in the soil samples collected and analyzed for this unit. Based on the results of the laboratory analyses of soil samples collected and analyzed for this unit, there is no evidence that a release occurred from this unit. As a result, the area has been adequately characterized and no further action is warranted for this unit.

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TABLES

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Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit

2. Printed on 05/18/98

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Notes: 1. Only Detects Shown
2. Printed on 05/13/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

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Page 1 of 8

	Location ID	NK-SB-03	NK-SB-03	NK-SB-03	NK-SB-03	NK-TP-11E	NK-TP-11N	NK-TP-11S
	Sample ID	1006259	1006260	1006261	1006261	1635146	1635144	1635145
	Sample Date	08/08/1995	08/08/1995	08/08/1995	08/08/1995	06/09/1997	06/09/1997	06/09/1997
	Sample Time	10:10	10:00	10:15	10:15	09:40	09:35	09:37
	Sample Depth	0' - 2'	2' - 4'	4' - 6'	4' - 6'			
	Laboratory	LEA	LEA	AEL	LEA	QUAN	QUAN	QUAN
	Lab. Number	95-00199-452	95-00200-453	AEL95008788	95-00201-454	A7F100149037	A7F100149035	A7F100149036
Constituent	Units							
Date Metals Analyzed	-			08/16/1995		06/27/1997	06/27/1997	06/27/1997
Date Organics Analyzed	-	08/09/1995	08/09/1995	08/18/1995	08/09/1995	06/21/1997	06/21/1997	06/21/1997
Date PCBs Analyzed	-			08/22/1995				
Arsenic	mg/kg			<1.21		<1.1 U	1.1	<1.1 U
Barium	mg/kg			43.2		33.6	20.3	21.4
Cadmium	mg/kg			<3.63		<0.11 U	<0.11 U	<0.11 U
Chromium	mg/kg			6.66		6.8	7.2	7.4
Lead	mg/kg			<24.2		4.8	5.5	9.4
Mercury	mg/kg			<0.242		<0.16 U	<0.16 U	<0.17 U
Nickel	mg/kg					6.8	6.2	7.1
Selenium	mg/kg			<1.21		<0.86 U	<0.86 U	<0.88 U
Silver	mg/kg			<6.06		<3.2 U	<3.2 U	<3.3 U
Zinc	mg/kg					20.0	17.5	23.2
PCB 1016	µg/kg			<240				
PCB 1221	µg/kg			<240				
PCB 1232	µg/kg			<240				
PCB 1242	µg/kg			<240				
PCB 1248	µg/kg			<240				
PCB 1254	µg/kg			<240				
PCB 1260	µg/kg			<240				
Dibromo-3-chloropropane, 1,2-	µg/kg					<5.4 U	<5.4 U	<5.5 U
Total Petroleum Hydrocarbons	mg/kg					<54 U	<54 U	<55 U
Dichloro-2-butylene, 1,4-trans-	µg/kg					<5.4 U	<5.4 U	<5.5 U
Acetone	µg/kg			<30		<110 U	<110 U	<110 U
Acetonitrile	µg/kg					<54 U	<54 U	<55 U
Acrolein	µg/kg			<15		<54 U	<54 U	<55 U
Acrylonitrile	µg/kg			<15		<110 U	<110 U	<110 U
Allyl Chloride	µg/kg					<110 U	<110 U	<110 U

Notes: 1. Printed on 05/13/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

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	Location ID	NK-SB-03	NK-SB-03	NK-SB-03	NK-SB-03	NK-TP-11E	NK-TP-11N	NK-TP-11S
	Sample ID	1006259	1006260	1006261	1006261	1635146	1635144	1635145
	Sample Date	08/08/1995	08/08/1995	08/08/1995	08/08/1995	06/09/1997	06/09/1997	06/09/1997
	Sample Time	10:10	10:00	10:15	10:15	09:40	09:35	09:37
	Sample Depth	0' - 2'	2' - 4'	4' - 6'	4' - 6'			
	Laboratory	LEA	LEA	AEL	LEA	QUAN	QUAN	QUAN
	Lab. Number	95-00199-452	95-00200-453	AEL95008788	95-00201-454	A7F100149037	A7F100149035	A7F100149036
Constituent	Units							
Benzene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Benzene (screening)	µg/kg	<3	<3		<3			
Bromobenzene	µg/kg			<6.1				
Bromoform	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Carbon Disulfide	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Carbon Tetrachloride	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Chlorobenzene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Chlorodibromomethane	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Chloroethane	µg/kg			<6.1		<11 U	<11 U	<11 U
Chloroethyl Vinyl Ether,2-	µg/kg			<6.1				
Chloroform	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Chloroprene,beta-	µg/kg					<5.4 U	<5.4 U	<5.5 U
Chlorotoluene,o-	µg/kg			<6.1				
Chlorotoluene,p-	µg/kg			<6.1				
Dibromomethane	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichlorobenzene,1,2-	µg/kg			<6.1				
Dichlorobenzene,1,3-	µg/kg			<6.1				
Dichlorobenzene,1,4-	µg/kg			<6.1				
Dichlorobromomethane	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichlorodifluoromethane	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloroethane,1,1-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloroethane,1,2-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloroethylene,1,1-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloroethylene,1,2-cis-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloroethylene,1,2-trans-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloropropane,1,2-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Dichloropropylene,1,3-	µg/kg					<5.4 U	<5.4 U	<5.5 U
Dichloropropylene,1,3-cis-	µg/kg			<6.1				

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

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	Location ID	NK-SB-03	NK-SB-03	NK-SB-03	NK-SB-03	NK-TP-11E	NK-TP-11N	NK-TP-11S
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	Sample Date	08/08/1995	08/08/1995	08/08/1995	08/08/1995	06/09/1997	06/09/1997	06/09/1997
	Sample Time	10:10	10:00	10:15	10:15	09:40	09:35	09:37
	Sample Depth	0' - 2'	2' - 4'	4' - 6'	4' - 6'			
	Laboratory	LEA	LEA	AEL	LEA	QUAN	QUAN	QUAN
	Lab. Number	95-00199-452	95-00200-453	AEL95008788	95-00201-454	A7F100149037	A7F100149035	A7F100149036
Constituent	Units							
Dichloropropylene,1,3-trans-	µg/kg			<6.1				
Dioxane,1,4-	µg/kg					<160 U	<160 U	<170 U
Ethyl Methacrylate	µg/kg					<5.4 U	<5.4 U	<5.5 U
Ethylbenzene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Ethylbenzene (screening)	µg/kg	<4	<4		<5			
Ethylene Dibromide	µg/kg					<5.4 U	<5.4 U	<5.5 U
Hexanone,2-	µg/kg			<15		<54 U	<54 U	<55 U
Iodomethane	µg/kg					<5.4 U	<5.4 U	<5.5 U
Isobutyl Alcohol	µg/kg					<54 U	<54 U	<55 U
Methacrylonitrile	µg/kg					<5.4 U	<5.4 U	<5.5 U
Methyl Bromide	µg/kg			<6.1		<11 U	<11 U	<11 U
Methyl Chloride	µg/kg			<6.1		<11 U	<11 U	<11 U
Methyl Ethyl Ketone	µg/kg			<15		<110 U	<110 U	<110 U
Methyl Methacrylate	µg/kg					<5.4 U	<5.4 U	<5.5 U
Methyl-2-pentanone,4-	µg/kg			<15		<11 U	<11 U	<11 U
Methyl-tert-butyl Ether	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Methylene Chloride	µg/kg			<15		<5.4 U	<5.4 U	<5.5 U
Propionitrile	µg/kg					<21 U	<22 U	<22 U
Styrene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Tetrachloroethane,1,1,1,2-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Tetrachloroethane,1,1,2,2-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Tetrachloroethylene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Tetrachloroethylene (screening)	µg/kg	<5	<4		<5			
Toluene	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Toluene (screening)	µg/kg	<4	<4		<5			
Trichloroethane,1,1,1-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U
Trichloroethane,1,1,1- (screening)	µg/kg	<8	<7		<8			
Trichloroethane,1,1,2-	µg/kg			<6.1		<5.4 U	<5.4 U	<5.5 U

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Table 3

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SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

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	Location ID	NK-TP-11W						
	Sample ID	1635147						
	Sample Date	06/09/1997						
	Sample Time	09:42						
	Sample Depth							
	Laboratory	QUAN						
	Lab. Number	A7F100149038						
Constituent	Units							
Date Metals Analyzed	-	06/27/1997						
Date Organics Analyzed	-	06/21/1997						
Date PCBs Analyzed	-							
Arsenic	mg/kg	<1.1 U						
Barium	mg/kg	<16.4 U						
Cadmium	mg/kg	<0.11 U						
Chromium	mg/kg	5.5						
Lead	mg/kg	2.2						
Mercury	mg/kg	<0.16 U						
Nickel	mg/kg	6.0						
Selenium	mg/kg	<0.87 U						
Silver	mg/kg	<3.3 U						
Zinc	mg/kg	<16.4 U						
PCB 1016	µg/kg							
PCB 1221	µg/kg							
PCB 1232	µg/kg							
PCB 1242	µg/kg							
PCB 1248	µg/kg							
PCB 1254	µg/kg							
PCB 1260	µg/kg							
Dibromo-3-chloropropane, 1,2-	µg/kg	<5.5 U						
Total Petroleum Hydrocarbons	mg/kg	<55 U						
Dichloro-2-butylene, 1,4-trans-	µg/kg	<5.5 U						
Acetone	µg/kg	<110 U						
Acetonitrile	µg/kg	<55 U						
Acrolein	µg/kg	<55 U						
Acrylonitrile	µg/kg	<110 U						
Allyl Chloride	µg/kg	<110 U						

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

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	Location ID	NK-TP-11W						
	Sample ID	1635147						
	Sample Date	06/09/1997						
	Sample Time	09:42						
	Sample Depth							
	Laboratory	QUAN						
	Lab. Number	A7F100149038						
Constituent	Units							
Benzene	µg/kg	<5.5 U						
Benzene (screening)	µg/kg							
Bromobenzene	µg/kg							
Bromoform	µg/kg	<5.5 U						
Carbon Disulfide	µg/kg	<5.5 U						
Carbon Tetrachloride	µg/kg	<5.5 U						
Chlorobenzene	µg/kg	<5.5 U						
Chlorodibromomethane	µg/kg	<5.5 U						
Chloroethane	µg/kg	<11 U						
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg	<5.5 U						
Chloroprene,beta-	µg/kg	<5.5 U						
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							
Dibromomethane	µg/kg	<5.5 U						
Dichlorobenzene,1,2-	µg/kg							
Dichlorobenzene,1,3-	µg/kg							
Dichlorobenzene,1,4-	µg/kg							
Dichlorobromomethane	µg/kg	<5.5 U						
Dichlorodifluoromethane	µg/kg	<5.5 U						
Dichloroethane,1,1-	µg/kg	<5.5 U						
Dichloroethane,1,2-	µg/kg	<5.5 U						
Dichloroethylene,1,1-	µg/kg	<5.5 U						
Dichloroethylene,1,2-cis-	µg/kg	<5.5 U						
Dichloroethylene,1,2-trans-	µg/kg	<5.5 U						
Dichloropropane,1,2-	µg/kg	<5.5 U						
Dichloropropylene,1,3-	µg/kg	<5.5 U						
Dichloropropylene,1,3-cis-	µg/kg							

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: X-410 Septic System Area

DRAFT

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	Location ID	NK-TP-11W						
	Sample ID	1635147						
	Sample Date	06/09/1997						
	Sample Time	09:42						
	Sample Depth							
	Laboratory	QUAN						
	Lab. Number	A7F100149038						
Constituent	Units							
Dichloropropylene,1,3-trans-	µg/kg							
Dioxane,1,4-	µg/kg	<160 U						
Ethyl Methacrylate	µg/kg	<5.5 U						
Ethylbenzene	µg/kg	<5.5 U						
Ethylbenzene (screening)	µg/kg							
Ethylene Dibromide	µg/kg	<5.5 U						
Hexanone,2-	µg/kg	<55 U						
Iodomethane	µg/kg	<5.5 U						
Isobutyl Alcohol	µg/kg	<55 U						
Methacrylonitrile	µg/kg	<5.5 U						
Methyl Bromide	µg/kg	<11 U						
Methyl Chloride	µg/kg	<11 U						
Methyl Ethyl Ketone	µg/kg	<110 U						
Methyl Methacrylate	µg/kg	<5.5 U						
Methyl-2-pentanone,4-	µg/kg	<11 U						
Methyl-tert-butyl Ether	µg/kg	<5.5 U						
Methylene Chloride	µg/kg	<5.5 U						
Propionitrile	µg/kg	<22 U						
Styrene	µg/kg	<5.5 U						
Tetrachloroethane,1,1,1,2-	µg/kg	<5.5 U						
Tetrachloroethane,1,1,2,2-	µg/kg	<5.5 U						
Tetrachloroethylene	µg/kg	<5.5 U						
Tetrachloroethylene (screening)	µg/kg							
Toluene	µg/kg	<5.5 U						
Toluene (screening)	µg/kg							
Trichloroethane,1,1,1-	µg/kg	<5.5 U						
Trichloroethane,1,1,1- (screening)	µg/kg							
Trichloroethane,1,1,2-	µg/kg	<5.5 U						

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Page 8 of 8

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Table 5
SUMMARY OF ANALYTICAL RESULTS - SLUDGE
P&W East Hartford: X-410 Septic System Area

DRAFT

Page 1 of 3

	Location ID	NK-SL-01	NK-SL-01				
	Sample ID	01017071493	1006169				
	Sample Date	07/14/1993	08/02/1995				
	Sample Time		14:45				
	Laboratory	ENS	AEL				
	Lab. Number	0294100002SA	AEL95008563				
Constituent	Units						
Date Metals Analyzed	-	07/19/1993	08/11/1995				
Date Organics Analyzed	-	07/19/1993	08/08/1995				
Date PCBs Analyzed	-	07/20/1993	08/21/1995				
Arsenic	mg/kg	<1.7	<24.4				
Barium	mg/kg	70.7	227				
Beryllium	mg/kg	<0.69					
Cadmium	mg/kg	<1.7	<73.2				
Chromium	mg/kg		<122				
Chromium (Total)	mg/kg	<3.4					
Lead	mg/kg	9.0	<488				
Mercury	mg/kg	4.7	5.56				
Nickel	mg/kg	<6.9					
Selenium	mg/kg	<1.7	<24.4				
Silver	mg/kg	5.6	<122				
Zinc	mg/kg	384					
PCB 1016	µg/kg	<140	<16000				
PCB 1221	µg/kg	<140	<16000				
PCB 1232	µg/kg	<140	<16000				
PCB 1242	µg/kg	<140	<16000				
PCB 1248	µg/kg	<140	<16000				
PCB 1254	µg/kg	<140	<16000				
PCB 1260	µg/kg	<140	<16000				
Acetone	µg/kg	6300	<2400				
Acrolein	µg/kg		<1200				
Acrylonitrile	µg/kg		<1200				
Benzene	µg/kg	<86	<480				
Bromobenzene	µg/kg		<480				
Bromoform	µg/kg	<86	<480				
Carbon Disulfide	µg/kg	<86	<480 N1				

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Table 5
SUMMARY OF ANALYTICAL RESULTS - SLUDGE
P&W East Hartford: X-410 Septic System Area

DRAFT

Page 2 of 3

	Location ID	NK-SL-01	NK-SL-01					
	Sample ID	01017071493	1006169					
	Sample Date	07/14/1993	08/02/1993					
	Sample Time		14:45					
	Laboratory	ENS	AEL					
	Lab. Number	0294100002SA	AEL95008563					
Constituent	Units							
Carbon Tetrachloride	µg/kg	<86	<480					
Chlorobenzene	µg/kg	<86	<480					
Chlorodibromomethane	µg/kg	<86	<480					
Chloroethane	µg/kg	<170	<480					
Chloroethyl Vinyl Ether,2-	µg/kg		<480					
Chloroform	µg/kg	<86	<480					
Chlorotoluene,o-	µg/kg		<480					
Chlorotoluene,p-	µg/kg		<480					
Dibromomethane	µg/kg		<480					
Dichlorobenzene,1,2-	µg/kg		<480					
Dichlorobenzene,1,3-	µg/kg		<480					
Dichlorobenzene,1,4-	µg/kg		<480					
Dichlorobromomethane	µg/kg	<86	<480					
Dichlorodifluoromethane	µg/kg		<480					
Dichloroethane,1,1-	µg/kg	<86	<480					
Dichloroethane,1,2-	µg/kg	<86	<480					
Dichloroethylene,1,1-	µg/kg	<86	<480					
Dichloroethylene,1,2-	µg/kg	<86						
Dichloroethylene,1,2-cis-	µg/kg		<480					
Dichloroethylene,1,2-trans-	µg/kg		<480					
Dichloropropane,1,2-	µg/kg	<86	<480					
Dichloropropylene,1,3-cis-	µg/kg	<86	<480					
Dichloropropylene,1,3-trans-	µg/kg	<86	<480					
Ethylbenzene	µg/kg	<86	<480					
Hexanone,2-	µg/kg	<170	<1200					
Methyl Bromide	µg/kg	<170	<480					
Methyl Chloride	µg/kg	<170	<480					
Methyl Ethyl Ketone	µg/kg	<170	<1200					
Methyl-2-pentanone,4-	µg/kg	<170	<1200					

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DRAWINGS

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**SUMMARY
SITE INVESTIGATION AND REMEDIATION REPORT
AIRPORT/KLONDIKE AREA
AT
PRATT & WHITNEY
EAST HARTFORD, CONNECTICUT
EPA ID No. CTD990672081**

Prepared for:

**PRATT & WHITNEY
A UNITED TECHNOLOGIES COMPANY
400 Main Street
East Hartford, Connecticut 06108**

Prepared by:

**LOUREIRO ENGINEERING ASSOCIATES, P.C.
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LEA Comm. No. 68V8124

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Drawing 1 Site Location Map & Environmental Units

UNIT-SPECIFIC TECHNICAL MEMORANDA

Unit-Specific Technical Memorandum Introduction

North Airport:

The Rentschler Airport Area

North Klondike:

Explosives Storage Area

MERL Area

Undeveloped Land Area - North Klondike

X-312 / X-314 Area

X-401 Area

X-407 Area

X-410 Area

Former Oil Storage Rack

X-415 Area

X-430 Area

South Klondike:

Cryogenics Area

Tie-Down Area

Undeveloped Land Area - South Klondike

X-307 Area

TECHNICAL MEMORANDA

Technical Memorandum 3 Groundwater Sampling and Quality

1. INTRODUCTION

Loureiro Engineering Associates, P.C. (LEA) was retained by Pratt & Whitney (P&W) to conduct a voluntary subsurface investigation at a portion of the P&W facility located at 400 Main Street (Main Street facility) in the Town of East Hartford, Connecticut. The portion of the Main Street facility addressed in this summary report is known as the Airport/Klondike Area (hereinafter referred to as the Site). The subsurface investigation at the Site was undertaken on a voluntary basis pursuant to Section 22a-133x(b) of the Connecticut General Statutes (CGS). It should be noted that Section 22a-133x of the CGS was recently codified and was formerly known as Section 3 of Public Act (PA) 95-183.

The activities at the Main Street facility are also subject to a Voluntary Corrective Action Program (VCAP). On July 17, 1996, P&W and the United States Environmental Protection Agency, Region 1 (EPA-New England) signed a Memorandum of Understanding (MOU) that outlines the principle components of the VCAP. P&W's principal objective, as discussed in the MOU, is to have initiated stabilization activities at the Main Street facility on or before December 31, 1999. With P&W's desire to transfer the Airport/Klondike portion of the Main Street facility in the near future, the Airport/Klondike Area is being taken to final remediation at this time.

Pursuant to Section 22a-133x(a) of the CGS (formerly Section 3(a) of PA 95-183), P&W is going to submit an Environmental Condition Assessment Form (ECAF) to the State of Connecticut Department of Environmental Protection (DEP). P&W is completing and submitting the ECAF in support of the intention to perform the investigation and, as necessary, the remediation of the Site under the direction of a Licensed Environmental Professional (LEP) pursuant to Section 22a-133x(b) of the CGS.

Preliminary discussions held with the DEP have indicated that the voluntary investigation and remediation of the Site could be conducted pursuant to Section 22a-133x(b) of the CGS. The provisions of Section 22a-133x(b) allow for the investigation and remediation of a site under the direction of an environmental professional licensed pursuant to Section 22a-133v(e) of the CGS. It should be noted that Section 22a-133v was recently codified and was formerly known as Section 4(e) of PA 95-183. This report provides documentation of the site characterization investigations that have been performed to characterize the nature and delineate the extent of contamination identified on the Site, documentation of the remediation activities that have been

conducted, and relevant information necessary to verify that the investigation and remediation have been performed in accordance with prevailing standards and guidelines.

1.1 Background

The P&W Main Street facility is located on over 960 acres with over 6.5 million square feet of floor area for manufacturing, research, office space, and space for related activities and support services. The Main Street facility has been used for the manufacture of aircraft engines and aircraft engine components since December 1929. Operations at the facility include (or have included in the past) metal parts machining, vapor degreasing, chemical etching, cleaning, electroplating, painting, assembly and testing, and research operations.

To the east of the main complex of the Main Street facility lies the Airport/Klondike Area consisting of the Rentschler Field and an area known as the Klondike. The Airport/Klondike Area was used for experimental test operations as well as ancillary support operations for the main complex. This approximately 600 acre Airport/Klondike Area is the Site as addressed in this report.

1.2 Goals and Objectives

The primary objective of the subsurface investigation was to determine whether or not there has been a release(s) to soil or groundwater due to activities conducted at the Site, and if a release is identified, to determine if remediation is required. Therefore, the subsurface investigations were conducted in a manner that would support evaluation of the need for remediation in accordance with the requirements of the Connecticut Remediation Standard Regulation (Sections 22a-133k-1 through 22a-133k-3) of the Regulations of Connecticut State Agencies (RCSA).

The subsurface investigation was designed to provide sufficient information to characterize the nature and delineate the extent of contamination detected on the Site. To achieve the stated goal and objectives, the subsurface investigation was conceived to include both environmental setting and contaminant delineation investigations. The objective of the environmental setting activities was to develop a site-wide understanding of environmental conditions in soils and groundwater, particularly in the context of how those conditions might affect the fate and transport of potential contaminants. The environmental setting investigations were also designed to characterize the unconsolidated materials in terms of physical characteristics to define the stratigraphy and soil properties of both the saturated and unsaturated zones across the Site.

The objective of the contaminant delineation investigation was to define the nature, and delineate the extent of soil and groundwater contamination at the Site. The contaminant delineation investigation was designed to include both initial and focused soil sampling activities and site-wide groundwater sampling activities. The initial activities were designed to quickly evaluate larger portions of the Site and included soil vapor surveying and geophysical surveying consisting of both time-domain electromagnetic induction (TDEM) and magnetometry. The results of the initial activities were used to direct the placement of soil borings and test-pit excavations to be conducted in the focused soil sampling activities in select areas at the Site. Groundwater contamination is evaluated from a site-wide perspective due to the nature of groundwater movement and contaminant transport.

1.3 Report Organization

This summary report documents the investigation and remediation activities completed for the Airport/Klondike Area between June 1996 and June 1998, interprets the data collected, and provides conclusions derived from this data.

1.3.1 Main Document Sections and Appendices

In presenting the investigation and remediation activities completed for the Airport/Klondike Area, section discussions are followed by supporting tables, figures, and drawings. The following is a general description of the contents of each of the following sections of the report.

- Section 2 includes a summary facility description and includes pertinent background information. In addition, it contains information regarding facility operations and former investigations conducted at the Site.
- Section 3 describes the methodologies for the field investigation activities performed during the Site characterization. These activities included the performance of soil vapor and geophysical surveys, soil boring installation, monitoring well installation, the performance of test-pit excavations, and soil and groundwater sampling.
- Section 4 describes the methodologies for the management, documentation, and presentation of the data collected as part of the investigation and remediation activities.
- Section 5 presents the results of the environmental setting investigations conducted at the Site. In addition, it details the environmental setting of the Site and includes

discussions of the site-specific geologic and hydrogeologic conditions encountered and of regional geologic and hydrogeologic conditions as derived from available published information.

- Section 6 presents a site-wide overview of the soil and groundwater analytical results obtained during the contaminant delineation investigations.
- Section 7 provides an evaluation of the soil and groundwater data against the applicable numeric criteria established pursuant to the Remediation Standard Regulation (RSR).
- Section 8 presents the remediation activities that were conducted at the site to satisfy the RSR.
- Section 9 presents a summary of the findings of the investigation and remediation activities performed to date and conclusions.

1.3.2 Tables, Figures, and Drawings

To maintain the readability of this report and to prevent the numerous tables and figures from interfering with the flow of the text, all of the tables, figures, and drawings have been placed after the final text sections of the main body of the report. Table and figure groupings are marked with dividers so readers can easily refer to them when necessary. Supporting documents, including daily field reports, analytical data, boring logs, well completion logs, and geophysical investigation reports can be provided under separate cover.

1.3.3 Unit-Specific Technical Memoranda

Technical Memoranda that present the results of soil sampling and analysis in the vicinity of specific environmental units that were investigated as part of the Site investigation activities have been prepared to aid in the identification and evaluation of sources or potential sources of contamination at the Airport/Klondike Area of the P&W Main Street facility. These Unit-Specific Technical Memoranda (USTMs) include pertinent background information for each of the environmental units for which a subsurface investigation was conducted. USTMs were also prepared for those units that did not warrant a subsurface investigation.

The investigations were not intended to specifically address the occurrence of contamination in groundwater. Groundwater contamination is evaluated from a site-wide perspective due to the nature of groundwater movement and contaminant transport. However, to provide a

comprehensive presentation of the available information, a summary of groundwater information is included in the USTMs. Additional information concerning the USTM organization and conventions is included in a separate introduction for the USTMs.

As applicable, each USTM includes the rationale for conducting any investigation activities at that location, an outline of any investigation that was performed, analytical results from the investigation, and any conclusions based on the data collected. In cases where remediation activities were conducted, each USTM also includes the rationale for conducting any remediation activities at that location, an outline of any remediation activities that were performed, the analytical results upon completion of the remediation activities, and conclusions based on the data collected.

1.3.4 Activity Technical Memoranda

Technical Memoranda (TMs) describing investigation or remediation activities that were undertaken as part of the Site investigation and remediation have been included as part of the report to document those activities in greater detail than would be feasible in the main body of the report. In all, four TMs have been prepared. The titles are noted below:

- TM 1, *Monitoring Well Installation and Development and Soil Sampling*
- TM 2, *Water Level Measurements*
- TM 3, *Groundwater Sampling and Quality*
- TM 4, *Background Soil Data*

These TMs have been presented in several separate volumes following the main body of the report and the volumes containing the USTMs.

2. BACKGROUND INFORMATION

The intent of this section is to provide the reader with an overview of the Site background information. This section provides background information pertinent to the Site and includes information on the Site location, a description of operations conducted, and a discussion of the layout of the Site.

2.1 Site Location and Description

The Pratt & Whitney (P&W) Main Street facility is located on over 960 acres with over 6.5 million square feet of floor area for manufacturing, research, office space, and space for related activities and support services. The facility has been used for the manufacture of aircraft engines and aircraft engine components since December 1929. Operations at the facility include, or have included in the past, metal parts machining, vapor degreasing, chemical etching, cleaning, electroplating, painting, assembly and testing, and research operations.

To the east of the main factory complex of the Main Street facility lies the Airport/Klondike Area consisting of the Rentschler Airport and an area, known as the Klondike, formerly used for experimental test operations as well as ancillary support operations for the main factory complex. This approximately 600 acre Airport/Klondike Area is the Site as addressed in this report.

The Main Street facility is bordered on the north by a residential neighborhood and Silver Lane, on the south by a residential neighborhood and Brewer Street, on the west by Main Street and a residential area, and on the east by a residential area and Penney High School. A topographic map of the site was prepared from portions of the Glastonbury, Hartford-North, Hartford-South, and the Manchester United States Geologic Survey (USGS) 7.5 minute topographic maps and is included as Figure 1. A site plan of the entire facility is provided as Figure 2. Figure 2 also indicates the Airport/Klondike Area which is the focus of this report.

Willow Brook runs through the north end of the complex in an east to west direction toward the Connecticut River. The brook is dammed and ponded in the vicinity of the Centralized Waste Storage & Transfer Facility (CWS&TF) located within the Main Street facility. The United Technologies Research Center (UTRC) (EPA ID No. CTD095532131), through which a portion of Willow Brook passes, is located on the north central border of the Main Street plant and does not constitute part of the Main Street facility.

Overall, the Main Street facility has been divided into 26 study areas. Of these study areas, the 4 areas that encompass the Airport/Klondike Area include the North and South Airport Areas and the North and South Klondike Areas as shown on Drawing 1. Within the 4 study areas addressed in this report, there are a total of 24 sub-areas. Within the 24 sub-areas, there are a total of 104 environmental units that are described in 63 Unit-Specific Technical Memoranda (USTMs). A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1.

2.2 Data Review

The Airport/Klondike Area has been the subject of specific investigations and included in site-wide investigations related to environmental conditions since the mid-1960's. These reports and other sources of information were reviewed in an attempt to consolidate the information and evaluate the coverage to determine the focus of future investigation and remediation activities. A listing of reports addressing investigations conducted in the Airport/Klondike Area is included in the References at the end of this report.

2.2.1 Master Files Search

Documents contained in the files of the Environment, Health and Safety Group at the P&W East Hartford facility were reviewed by Loureiro Engineering Associates, P.C. (LEA) personnel for information related to the Airport/Klondike Area. Maps, photographs, and figures which were included in the General Environmental Files were reviewed to see if they contained pertinent information related to the Airport/Klondike Area. Additional historical information, including layout drawings, was gathered from the Andrew Willgoos Gas Turbine Laboratory files and Facilities and Services files.

2.2.2 City Directory Search

A search of historical city directory records was performed by Environmental Data Resources Sanborn, Inc. (EDR) for the Main Street facility. The search did not locate any information for the facility.

2.2.3 Fire Insurance Maps

Database searches were performed to retrieve historical information available for the Main Street facility. LEA contracted with EDR to provide copies of all available fire insurance maps of the area.

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The search revealed that twenty-four Sanborn® fire insurance maps were available for the general vicinity of the three P&W East Hartford facilities. Maps were available for the following years: 1903 (two maps); 1908 (three maps); 1913 (four maps); 1920 (four maps); 1927 (three maps); 1949 (three maps); and 1968 (five maps). However, the Main Street facility was never directly mapped by the Sanborn Company.

The 1903 Sanborn® maps show that the Main Street area of East Hartford was primarily a mixture of residences and tobacco sheds. The area to the northeast of the Brewer Street - Main Street intersection is labeled as "vacant".

The 1908 Sanborn® maps show that the Main Street area remained primarily a mixture of residences and tobacco sheds. The area presently occupied by a portion of UTRC and Rentschler Airport was occupied at that time by the Silver Lane Pickle Company. The area to the northeast of the Brewer Street - Main Street intersection is still labeled as "vacant".

The 1913 Sanborn® maps show that the area remained essentially the same as it was in 1908: a mixture of residences and tobacco sheds along Main Street. The 1913 maps show the Connecticut Tobacco Company offices and warehouses along Willow Street, approximately 1000 feet east of Main Street.

The 1920 Sanborn® maps show little change along Main Street in the area of the Main Street facility. A post office is shown on the northeast corner of the Brewer Street - Main Street intersection and the Connecticut Tobacco Company facility remains on Willow Street. The Silver Lane Pickle Company factory is still present.

The 1927 Sanborn® maps show that the Main Street area has remained unchanged along the eastside. However, two auto repair facilities have been established along the west side. The Silver Lane Pickle Company remains, and the post office is still shown to the northeast of the Brewer Street - Main Street intersection. A service station is shown just to the north of the post office and two gasoline tanks are indicated.

The 1949 Sanborn® maps show a general outline of the P&W buildings on Main Street. The former American Sumatra Tobacco Company offices are shown, labeled as "Pratt & Whitney Aircraft Company", and a general outline of the western edge of the main factory building appears. The power-house is shown, as is the former Hamilton Standard Propellers company building south of the main P&W factory building. The 1949 map shows the expansion of the facility including the main plant, J Building, and the hangars with ancillary buildings. There was no mapping to the east of the P&W property.

The 1968 Sanborn® maps show the Main Street facility as belonging to P&W, but no mapping was done because admittance to the facility was refused. Mapping was not done to the east, probably because of the residential nature of the area. The area previously occupied by the Silver Lane Pickle Company was marked as belonging to P&W, the Pickle Company buildings were crossed off and the notation “all buildings removed” was evident on the maps.

2.2.4 Topographic Maps

EDR also reviewed and provided historical topographic mapping for the Main Street facility. The Main Street facility lies at the intersection of four quadrangles: Hartford North, Hartford South, Manchester, and Glastonbury. EDR provided copies of most but not all historical topographic maps for the site. It should be noted that the information provided below is based solely on map comparison for the years available, and parts of the information provided may contain gaps due to incomplete mapping.

The 1952 topographic map shows the Main Street facility at its present location and the Silver Lane Pickle Company facility in the vicinity of the current UTRC building. The Manchester quadrangle was not available for this year. The 1963/1964 topographic maps show the Silver Lane Pickle Company buildings removed and the UTRC building constructed. The P&W factory complex was in place.

The 1968/1972 topographic maps show the Main Street facility unchanged since 1963/1964, and the office buildings in the Rentschler Airport were shown as constructed. There was evidence of some construction of small buildings in the Klondike Area. The 1984 topographic maps show minor construction at the airport, and additional construction in the Klondike Area. The 1992 topographic maps show some minor additions to the main factory buildings, an additional office building, some road construction, and some additional buildings in the Klondike Area.

2.2.5 Aerial Photographs

Aerial photographs of the Airport/Klondike Area were available from several sources. In addition to those on file and privately flown by P&W, aerial photographs were also on file with the State of Connecticut Department of Environmental Protection (DEP), the Connecticut State Library Archives, the United States Environmental Protection Agency (EPA), and various commercial sources.

A survey of aerial photographs available for the site was also performed by EDR. EDR's review indicated that the readily available photograph was from 1951. A color infrared photograph was

reported to be available from 1986. The origins of the photographs were not reported. The photographs are available from National Aerial Resources, Inc.

In addition, aerial photographs of the facility were taken in April 1990 by Golden Aerial Survey, Inc. in an effort to obtain an accurate topographic map of the facility. The topographic map developed based on the aerial photographs identified all buildings and roads at the facility at a scale of 1 inch equals 200 feet.

As mentioned previously, aerial photographs were contained in the master files of the Environment, Health and Safety Group. Furthermore, a record of photographs (including aerial photographs) of the Main Street facility is maintained by the P&W Photographic Services Department. A review of archive photographs from early 1930's until the present was conducted for those photographs which show the development and detail of the Airport/Klondike Area.

Aerial photographs on file with the DEP for the years of 1965, 1970, 1975, 1980, 1986, and 1990 were reviewed for those flight lines which passed over the Airport/Klondike Area. The expansion and development of the Site was clearly visible in these photographs. Between 1965 and 1970, development of the South Klondike Area consisted of the original X-307 test stand, the area of drum storage south of the Cryogenics Building, the Quonset Hut, the six storage yards in the Virgin Products Storage Area, the Contractor Storage Area, and the new control tower on the south end of the airport.

The 1975 photographs shows the lengthening of the airport runways. The 1980 photograph shows the construction of Fire Training Area A. In the 1986 photograph, the Linde Gas Plant has been replaced with the Chemical Storage Building. In general, the 1990 photograph shows lessened activity in the Klondike Area as indicated by smaller quantities of equipment and vehicles present.

Archive aerial photographs on file in the Connecticut State Library for 1934 and 1951 were reviewed for those flight lines which passed over the Rentschler Airport and the Klondike Areas. In the 1934 photograph, the airport was new and there was no development of the Klondike Area. In the 1951 photograph, the first development of the North Klondike Area was visible.

A request was made to the EPA for information regarding aerial photographs. Apparently the flight lines flown for the USGS are the same lines used by the EPA. The EPA had no specific flights over the East Hartford Area. A 1981 photograph obtained from the EPA included the Site, but did not have enough detail for use. No photographs were requested from the USGS due

to similar coverage and the amount of processing time required to fulfill the request (approximately two to three months).

Large-scale aerial photographs for 1965, 1970, and 1975 were obtained from Keystone Aerial Surveys Inc. A large-scale aerial photographs for 1980 was obtained from AeroGraphics Corporation. These photographs were at a scale sufficient to provide a great deal of detail for the majority of the Site. Overall, these photographs provided confirmation of the information obtained from the various other photographs and sources of information.

2.3 Site History and Ownership

The majority of the property on which the Main Street facility is currently located was purchased by United Aircraft Corporation, now United Technologies Corporation, from American Sumatra Tobacco Company in 1930. At the time it was purchased, the eastern portion of the property, which subsequently became the Airport/Klondike Area, was a tobacco field. Over time, additional parcels were purchased and included as part of the Main Street facility.

Rentschler Field was opened in 1931 and at that time it was an all-turf airfield. The all-turf airfield consisted of approximately 165 acres of land constructed to promote drainage and suitable for use in all weather conditions and seasons. During the initial operations, Rentschler Field had two hangars including a service hangar and an experimental hangar.

Originally created as a test field, Rentschler Field was subsequently expanded into a service center for the overhaul and maintenance of P&W engines. The airfield served as a base for experimental flight tests of airplanes, engines, and propellers. The hangars associated with the airport were used to service company-owned and customer-owned airplanes. The airport was used for scheduled flights by American Airlines in 1939 and for the flight testing of the Vought Corsair.

Construction of an airport expansion began in 1939 and was completed in 1941. In 1941, the hangars were moved more than one-half mile from an area to the west of the runways, in the approximate location of L and M Buildings within the main factory complex, to the northwest edge of the field at their present location. Coinciding with the airport expansion, the hangar size was doubled. At that time, the runways were paved and the runways extended to 3,500 feet for the north-south runway and 3,000 feet for the northeast-southwest runway. The expansion of the airport also included the construction of a control tower, the construction of an experimental laboratory, and offices. The majority of these construction activities were completed to the west and off the Site.

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P&W's Airport Division cooperated in the war program by overhauling engines in service to the United States (U.S.) Armed Forces, the British Air Commission and other major airlines and companies engaged in the war effort. The airfield also became the operating base for certain U.S. Armed Forces, the British Air Commission, major airlines and companies engaged in the war effort. In support of the war effort, U.S. Army Air Forces pursuit groups, which provided fighter-plane protection for manufacturing plants in the greater Hartford area, were based at the airport. Between 1941 and 1945, the Main Street facility and the airport were leased by the U.S. government as part of this war effort.

In 1945, the airfield was modernized and expanded to include three asphalt runways, each a mile long, and a fully equipped, 57-foot control tower. Given the low elevation of the airport, fill was excavated from the Klondike Area and placed on the airport. This excavation accounts for some the wetland areas in the undeveloped area along the east side of the North Klondike Area. During this period, the Tie-Down Area, located in the South Klondike Area, was used to secure aircraft close to the runways. The Tie-Down Area was also used for aircraft refueling from an aboveground storage tank. In 1947 the name of the airport was changed from Rentschler Field to Rentschler Airport.

Throughout the 1930's and part of the 1940's, the Klondike Area remained undeveloped. In the early 1950's, the North Klondike Area was developed to include the numerous buildings and test stands in association with a project code named "Suntan". It has been reported by various sources that the term "Suntan Project" resulted from the use of hydrogen in test stands. At approximately this same time, undeveloped parcels to the east and south of the developed portion of the North Klondike Area were purchased.

In the late 1950's, the South Klondike Area was developed to include the Linde Gas Plant, the Cryogenics Building and the Fire Pump House. A firing range also existed in the South Klondike Area, although the exact times of construction and operation are unknown. A large portion of the Klondike Area, along the eastern most edge of the property, has been undeveloped throughout its history.

A new control tower, at the south end of Rentschler Airport, was built and occupied by May 1966. At that time, parking areas were enlarged to accommodate the expanding work force at the airport. Between 1965 and 1970 the South Klondike Area was expanded with the drum storage areas, the Quonset Hut Storage Area, the X-307 test stand, and the six storage yards included in the Virgin Products Storage Area. In 1967, new experimental test cells for the JT9D engine were constructed in the Klondike Area.

Rentschler Airport runways were lengthened in 1971. A microwave landing system was also installed in 1971 to improve night landings. With these improvements, Rentschler Airport became the second largest airport in Connecticut, smaller only than Bradley International Airport. Few major changes took place in the 1980's.

The majority of the Klondike Area remained active until the early 1980's when some test stands were dismantled and moved to other facilities off the Site. Through the late 1980's and early 1990's, the use of the Klondike Area was gradually diminished. The buildings in the Klondike Area were razed in 1993 with the exception of the generator/transformer room associated with the Fire Pump House in the South Klondike Area. The Airport was shut down in December 1994. Currently, the Airport/Klondike Area is no longer used for any production, testing or research operations.

2.4 Facility Operations

The Main Street facility is involved in the manufacture, development, and testing of jet engines and jet engine components. The facility has been used for the manufacture of aircraft engines and aircraft engine components since December 1929. Operations at the facility include, or have included in the past, metal parts machining, vapor degreasing, chemical etching, cleaning, electroplating, painting, assembly and testing, and research operations.

The Airport/Klondike Area was formerly used for experimental test operations as well as ancillary support operations for the factory main complex. There were various test stands or test cells for conducting test operations. Overall, most any type of testing for aircraft engine, jet-engine, rocket components were conducted within the test stands. The various types of testing included airflow, erosion, combustion, fire resistance, anti-icing, sound abatement, foreign object ingestion, crosswind, and vertical takeoff or landing (VTOL) performance.

To support the testing operations, the test stands were provided with any or all of the following services and utilities: compressed air, oxygen, hydrogen, nitrogen, methane, propane, DC and AC power (120, 240, and 480 volts), fuels (hard-piped or tank), fire protection equipment, and vacuum supply. The fuels for the test operations were either supplied from a central tank farm, such as the X-312 tank farm, from local tanks in the particular area, or from containers.

In the X-312 tank farm, the fuels were stored in three 3000 gallon, two 5000 gallon, and one 15,000 gallon underground storage tanks (USTs). From the USTs, the fuels were distributed by 3-inch underground piping to the X-307, X-309, and X-312 test stands. The fuels typically used included JP-4 and JP-5 jet fuels. Other test areas were provided with local aboveground storage

tanks (ASTs) if any appreciable quantities of fuels were necessary. A listing of both ASTs and USTs that have been identified is included on Table 2. This listing of tanks includes all tanks that have been identified including those providing fuels for testing operations or fuels for heating. Table 2 does not include tanks used for the storage of gases such as hydrogen, nitrogen, oxygen, or propane.

For the ancillary support activities, the South Klondike Area was predominantly used for materials storage such as the storage of virgin product used in the manufacturing operations and wastes resulting from the production operations. While the main waste storage and handling areas were part of the main factory complex, some waste storage of production wastes was reported for the Virgin Products Storage Area. Containers of oils and solvents have been stored on both paved and unpaved areas within the South Klondike Area. Another support activity in the South Klondike Area was the Linde Gas Plant for the production of hydrogen from natural gas.

Various areas within the Airport/Klondike Area were used to conduct fire training exercises. Flammable and combustible materials were used in the fire training exercises for the airport crash response team. Typically, the area was an earthen depression that was filled with flammable and combustible liquids prior to fire-fighting training exercises. One of the areas, Fire Training Area A, was a specially-constructed concrete and pavement area for the fire training exercises.

2.5 Waste Management Operations

The Main Street facility is involved in the manufacture, development, and testing of jet engines and jet engine components. Materials and processes used in those operations generate, or have generated, large quantities of wastes. These wastes include, or have included, industrial wastewater, dilute oily wastes, characteristic hazardous wastes (i.e., ignitable, corrosive, reactive, and toxic) and listed hazardous wastes (e.g., spent solvents).

P&W also utilizes, or has utilized, a wide variety of products that are hazardous wastes such as acids, alkalies, cyanides, alcohols, metal plating solutions, specialty solutions, fungicides, epoxy, cleaners, resins, paints, solvents, fuels, and many commercial chemical products listed in 40 CFR 261.33(e) and (f). PCB wastes have also been generated at the Main Street facility.

Specific processes which use the above products and which result in the generation of hazardous wastes include or have included the processes listed below. Note that processes followed by an asterisk (*) have virtually been eliminated at the Main Street facility based on present operations.

- Product rinsing, stripping, cleaning, degreasing, alkali and acid cleaning, vapor degreasing*, salt bath descaling;
- Electroplating, etching, plating, anodizing, heat treating, electroless plating, painting operations, acid treatment (pickling), chromate conversions*;
- Abrasive jet machining, chemical machining, electrochemical machining*, electrical discharge machining, general machining;
- X-ray testing, fluorescent penetrant inspection, magnetic penetrant inspection, photo developing; and;
- Sludge removal, solvent reclamation*, battery replacement spill cleanup, process decontamination, cleaning fuel systems, remediation and decommissioning activities, removal of obsolete materials, machine oil changes, general maintenance and housekeeping activities.

In terms of the Airport/Klondike Area, the wastes could have included many of the same types of wastes generated at the main factory complex. These wastes could have included industrial wastewaters, dilute oily wastes, characteristic hazardous wastes (i.e., ignitable, corrosive, reactive, and toxic) and listed hazardous wastes (e.g., spent solvents) resulting from the test operations.

2.6 Area Descriptions

A general description of each of the sub-areas is provided below with more detailed discussions regarding the specific environmental units within each sub-area provided in the applicable USTM included with this report. These environmental units were selected based on the types of activities conducted at each area and the potential for those activities to have adversely impacted the various environmental media at the Site including, soil, groundwater, surface water, and sediment. Although other areas of the Site may have been impacted by historic practices at the Site, no other specific potential contaminant source areas were evident from the available information.

The Airport/Klondike Area is located on the eastern portion of the P&W Main Street facility on the east side of the main plant, north of Brewer Street and south of Silver Lane. The Airport/Klondike Area consists of 4 study areas that include the North and South Airport Areas and the North and South Klondike Areas. Within the 4 study areas addressed in this report, there

are a total of 24 sub-areas. Within the 24 sub-areas, there are a total of 104 environmental units that are described in 63 USTMs. The layout of the Airport/Klondike Area complete with the study areas and sub-areas is shown on Drawing 1. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1.

2.6.1 North Airport Area

The North Airport Area is an approximately 211 acre area that generally includes the majority of the airport proper. The North Airport Area consists of two sub-areas comprised of a total of six environmental units that are described in five USTMs. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1. The layout of the North Airport Area is shown on Drawing 1. A brief description of the two sub-areas is provided below.

2.6.1.1 Rentschler Airport

For purposes of this study, the Rentschler Airport Area is generally limited to the runway and taxi areas. The aircraft hangars and the airport terminal are not included as these areas are not part of the Airport/Klondike Area, the Site, that will be sold or transferred. The airfield was opened in 1931 as an all-turf airfield. Improvements were made through the years which resulted in the present configuration of two main runways. The Rentschler Airport was used for the take-off and landing of a variety of commercial and military aircraft.

Army Barracks that were used as temporary quarters of military personnel were once located on the northwestern portion of the airfield. The Army Barracks extended from the northern end of the north-south runway continued westward into the present UTRC Area. There were approximately thirty-three buildings (including barracks, mess, recreation, dispensary, supply and administration operations, warehouses, school, and radio) that were part of the Army Barracks complex.

2.6.1.2 Former Silver Lane Pickle Company

Based on available information, the Silver Lane Pickle Company had a varied production line that included different kinds of pickles and vinegars, horseradish, horseradish root, chowchow, German mustard, pepper relish, onion relish, sauerkraut, piccalilli, dill tomatoes, ketchup, and chili sauce. The former Silver Lane Pickle Company had three different areas where there were USTs of unknown sizes identified. From the northeast to the southwest, there were two USTs

with a dispenser pump at one location, three USTs at a second location, and one UST at a third location. The former contents of the USTs are not known, but were likely to have been fuels.

The Silver Lane Pickle Company sold the property to United Aircraft in 1954 and 1963 with the former buildings being demolished in 1963 and 1964. Since 1964, the property has been undeveloped. Along the western boundary of the former Silver Lane Pickle Company property, there are several contiguous piles of soil which contain various rubble and debris. Origin and reason why the soil piles were created is not known. It is possible that the soil piles were created during the demolition of the former buildings.

2.6.2 North Klondike Area

The North Klondike Area is an approximately 116 acre area that generally includes the northern half of the area to the east of the airport. The North Klondike Area consists of ten sub-areas comprised of a total of seventy environmental units that are described in thirty-two USTMs. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1. The layout of the North Klondike Area is shown on Drawing 1. A brief description of the ten sub-areas is provided below.

2.6.2.1 North Klondike Undeveloped Land Area

The land north and east of the developed portion of the North Klondike extends almost to Silver Lane to the north and Penney High School to the east. This area is mostly wooded, but has been cleared in some locations. Filling of low-lying areas and the accumulation of soil piles and debris has taken place along the western side of the North Klondike Undeveloped Land Area. Reportedly, this location has been used for parking lot sweepings and construction demolition materials. To the east of the soil piles, an area had been cleared, filled, and was used for the storage of vehicles. The area to the east has not been developed. Based on available information, the undeveloped area along the eastern edge of the Site has only been used for borrow material when filling and developing the airport.

2.6.2.2 X-401 Area

The X-401 test stand area consisted of one building, one shed, and a covered area (the Pavilion) containing a storage tank. Within the two buildings were test stands X-401, X-402, and X-403. Also included within this area were the Locker Room, Fire Training Area C, and the X-401 Dry Wells. The main building, which housed test stands X-401, X-402, and X-403, consisted of a concrete floor with two rooms and corrugated steel walls. The northern room contained the test

cells and the southern room contained the control room. The test cells were equipped with an exhaust duct and heat exchanger. Adjoining the test cells, a compressor was housed in a corrugated steel and wood frame enclosure and apparently provided the compressed air for engine testing.

The equipment shed was a wooden structure on a concrete slab floor. The conduit and an electrical service junction box rose from the floor in the southwest corner of the former shed. The Pavilion consisted of wooden frame structure with a corrugated metal roof. The floor was comprised of steel grating placed over a concrete block support. Copper tubing fuel lines connected the test cells/control room to the Pavilion, following a utility trestle which passed over the entrance drive to the control room.

Fire Training Area C was near the western edge of the X-401 Area. Flammable and combustible materials were used in the fire training exercises for the airport crash response team. An earthen pit was filled with water prior to fire-fighting training exercises.

Three dry wells were located north and west of the main building and received waste fluids from the test stands following tests. With the usage of fuel and cleaning solvents, these fluids may have been discharged to the dry wells. The X-401 Locker Room, which was located on the southeast edge of this area, was used by workers as a changing area and to wash up at the end of the day's activities. The Locker Room septic system was located north of the Locker Room.

2.6.2.3 X-407 Area

The X-407 Area consisted of five buildings and two sheds. The largest building contained the X-404, X-405, X-406, and X-407 test stands. Three smaller buildings contained the X-408 and X-409 test stands and a compressor. The compressor building was used to generate compressed air for engine tests. One shed on the southern portion of the area contained the North Klondike Pump House with booster pumps for the fire protection system.

This area was used as a general purpose test stand for testing any components requiring the available services and building construction. In addition, this area was also used as an erosion test stand which included the application of a flame and particles to a test specimen. In this area, engine tests were conducted which required the use of jet fuels and cleaning solvents. Tests were conducted from approximately 1957 until November 1979. At that time, the X-404, X-405, X-406, and X-407 test stands were converted for the storage of PCB-contaminated material and, eventually closed and demolished in 1993.

2.6.2.4 X-415 Area

The X-415 Area consisted of one building and one shed. The building contained the X-415, X-416, X-417, X-419, X-420, X-426, X-427, X-449, and X-450 test stands. The test stands were designed to handle small-scale (i.e., "Bunsen Burner" sized) combustion experiments and for research and basic experimentation on advanced combustion projects. Infrared tests were conducted in the long and narrow portion of the building. To the east of the building was a shed which housed the X-451 test stand. An oil-fired boiler complete with an AST was operated in this area.

The X-415 Area was equipped with a washroom and toilet with a septic system located to the east of the test stand. A dry well was located east of this area and likely received drainage from the building either from the floor drains or plumbing fixtures.

2.6.2.5 X-430 Area

The X-430 Area consisted of one building. The building contained the X-430, X-431, X-432, X-433, X-434, X-435, and X-436 test stands. Specific information on the test operations for this area were not available. It is believed that at a minimum, this area was used as a general purpose test stand for testing any components requiring the available services and building construction. Testing in this area began in approximately 1957. Records show that these test stands were idle in November 1989. The building was demolished in 1993.

2.6.2.6 Explosives Storage Area

The Explosives Storage Area was located on the eastern side of the North Klondike Area and consisted of two buildings, a shed (fence-enclosed), and open storage areas. The buildings and areas were used to store explosives and chemicals. Other portions of the area was used for the general storage of parts and vehicles. These areas were generally utilized for storage of explosives (hydrazine, nitrogen tetroxide, and pentaborane) and chemicals (acids and gases). Although specific references have not been identified, it is possible that portions of this area was also used for storage of motor fuels and cleaning solvents. This area was used from approximately 1957 until the buildings were demolished in 1993.

2.6.2.7 X-194 Area

The X-194 Area (also known as the X-448 Area) consisted of three buildings. The two larger buildings contained the test stand and control room for the area. The smaller building was

known as the Block House. In this area, research activities were conducted which included test burns of tubes containing beryllium powder in a chemical binder. Tube-sized rocket motors that were powered with beryllium-containing fuels were also tested in this area.

In addition, PCB oils and PCB-contaminated electrical equipment were reportedly stored in this area. These materials may have been stored in the Block House which was a fortified structure originally used for the storage of beryllium fuels. Also included was a fenced, paved storage area for U.S. Government owned equipment. The grass areas to the north and northeast of this area were used to store transformers, capacitors, and other mechanical equipment. The building was later used to store fuels and oils in 55-gallon drums. This building was also used for storage of office equipment and racks for electrical equipment.

During operation, there was reportedly a wet air scrubber to the south of the test stand to remove beryllium particles from the test exhaust. After filtration, the water from the scrubber was reportedly discharged to the sedimentation pond southeast of the test stand.

2.6.2.8 X-410 Area

The X-410 Area consisted of four buildings and two stands. One building contained the X-410, X-411, and X-412 test stands including the control rooms connected to each of the test stands. One of the other large buildings was the Maintenance and Storage Building which was in the northeast portion of the area. The Maintenance and Storage Building was equipped with a washroom and toilet with a septic system located to the south of the building. Compressed gasses (oxygen and acetylene) along with batteries and lighting ballasts were stored in the Maintenance and Storage Building. Typical maintenance activities included welding, torch cutting, and vehicle maintenance.

This area was a general purpose combustion component test facility designed to develop small combustion components such as gas turbine main burners. In addition, this area was also used for conducting combustion developed sound surveys. The X-412 test stand was used to study the fire resistance of fuel control and gearbox components. In this area, engine tests were conducted which required the use of jet fuels and cleaning solvents. Tests were conducted from approximately 1957 until June 1984. The buildings were demolished in 1993.

2.6.2.9 MERL Area

The MERL Area consisted of two buildings and one shed. One building contained an explosives forming test house. An undesignated building was located east of the test house and a test shed

was south of this building. Minimal information on the operations for this area was available. In this area, explosives forming of sheetmetal was reportedly conducted. The buildings were demolished in 1993.

Fire Training Area D was located in this area. Flammable and combustible materials were used in the fire training exercises for the airport crash response team. An earthen pit was filled with water prior to fire-fighting training exercises.

2.6.2.10 X-312/X-314 Area

The X-312/X-314 Area consisted of two test stands with ancillary sheds and an underground storage tank farm. The X-314 test stand was used for radial sound surveys. Instruments (microphones) were set up on the outside radius of the cleared area surrounding the test stand. This test stand was an outdoor test facility designated for inlet and exhaust sound surveys, performance calibrations, crosswind testing, foreign object ingestion, and thermal distortion tests of the largest turbofan engines. The X-314 test stand was equipped with a washroom and toilet with a septic system located north of the stand trailer. This area was used from approximately 1957 until demolition in 1990.

The X-312 test stand was an open test stand comprised of a blacktop test pad. The stand was provided with a flat roof overhead shelter and roll-up canvas curtains for weather protection. Controls and instrumentation required to operate the test engines and monitor its performance were in a wood framed control room located approximately 75 feet from the test stand. In the X-312 test stand, engine tests including exhaust silencer, crosswind generator, foreign object ingestion gun, portable microphones, icing system, smoke testing, and strain gauge measurements were performed.

The X-312 Tank Farm was a fuel distribution system for test stands immediately to the north and to the south in the South Klondike. The six USTs comprising the tank farm were located at the southwestern corner of this area. Three 3,000-gallon, two 5,000-gallon, and one 15,000-gallon USTs provided fuel supply for the four adjacent test stands. Fuel was fed to test stands through a 3-inch underground pipe network. This area was used from approximately 1957 until its demolition in 1990. Records that detail the closure activities for the tank farm were unavailable.

2.6.3 South Klondike Area

The South Klondike Area is an approximately 131 acre area that generally includes the southern half of the area to the east of the airport. The South Klondike Area consists of seven sub-areas

comprised of a total of twenty-three environmental units that are described in twenty-one USTMs. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1. The layout of the South Klondike Area is shown on Drawing 1. A brief description of the seven sub-areas is provided below.

2.6.3.1 Tie-Down Area

Originally, the Tie-Down Area was used to secure aircraft close to the runways. The Tie-Down Area is located adjacent to the Perimeter Road and between the North and South Access Roads. The Tie-Down Area was also used for general storage of various equipment and parts.

The Tie-Down Area consisted of two engine testing areas (X-309 and B-24), a storage area, and Fire Training Area A. The X-309 test stand was an outdoor test facility designed for specialized testing of turbojet engines on the northern edge of the Tie-Down Area. The specialized testing included basic engine calibration, anti-icing, sound abatement, foreign object ingestion, crosswind, and vertical takeoff or landing (VTOL) performance. The engine exhaust area was covered with trap rock held down with heavy wire screen to prevent erosion. The X-309 test stand was dismantled in June 1984 and the rest of the area was demolished in 1993.

The B-24 test stand consisted of a concrete trench and an exhaust deflector on the southern edge of the Tie-Down Area. Tests were conducted in this area by suspending an operational engine from the bomb bay of a B-24 airplane into the concrete trench. Exhaust from the engine was directed into the exhaust deflector. The tests conducted in this area required the use of jet fuels and cleaning solvents. The exhaust deflector used in for the B-24 test stand remains.

Fire Training Area A, which was used from the late-1960s to the late-1980s, was along the southeastern portion of the Tie-Down Area. Flammable and combustible materials were used in the fire training exercises for the airport crash response team. Originally, Fire Training Area A was an earthen depression that was filled with flammable and combustible liquids prior to fire-fighting training exercises. Reportedly, the training fires were conducted in shallow pans directly on the soil.

In 1984, Fire Training Area A was upgraded with the construction of concrete burns pit within an asphalt area. The impacted soils resulting from the prior use of the area were reportedly excavated for disposal off the site. The reconstructed Fire Training Area A consists of a paved area which measures 80 feet by 100 feet with asphalt berms running along the perimeter. Within the paved area, there are three concrete burn pits of various sizes that were used for the training fires. Catch basins are located in the center of the overall area as well as in each of the concrete

containment pits to collect rain water or any flammable liquids. The catch basins drain to an oil/water separator. Water from the separator discharged to the intermittent pond on the south side of the area.

2.6.3.2 Firing Range Area

A firing range was identified on an available drawing depicting a portion of the South Klondike Area. The firing range consisted of an apparent firing mound to the west and a kidney-shaped earthen backstop mound to the east. Based on a review of a 1948 aerial photograph, there appeared to be several connecting corridors between the mounds which may have represented devegetated pathways. The earthen backstop mound still exists, and is approximately 20 feet high and 100 feet long.

2.6.3.3 Former Linde Gas/Chemical Storage Building Area

The former Linde Gas Area was a 90,000-square foot area containing a hydrogen gas plant. The gas plant was used for the manufacture of hydrogen gas from natural gas. The former Linde Gas manufacturing plant was built in 1965 and was present until being replaced by the Chemical Storage Building in 1981. The exact dates of operation are unknown.

In 1981, the Chemical Storage Building was constructed as a 100 foot by 160 foot building divided into equal halves. The building was demolished in 1993. Immediately to the west of the Chemical Storage Building was a 25 foot by 35 foot building formerly known as the Control Room. The foundation of the Chemical Storage Building is a raised slab approximately 4 to 5 feet above the ground surface. The loading and unloading area was located on the south side of the Chemical Storage Building. A UST was located beneath the southern edge of the Chemical Storage Building and the former loading and unloading area. This UST was fuel oil tank of unknown size that had been used as part of Former Linde Gas operation.

In addition to the buildings, several outdoor storage areas of drums and a dumpster were observed on facility aerial photographs from approximately 1977. Two drum storage areas and one dumpster were formerly located north and west, respectively, of the former hydrogen gas plant (where the Chemical Storage Building was later constructed).

A pump dispenser island in the western portion of the area was observed on facility aerial photographs from approximately 1977. It was assumed that a UST would be located near the pump island. However, the size and contents of the UST are unknown. Presently, only the

concrete pad of the former pump dispenser island remains. It is possible that the pump island was utilized for the dispensing of the hydrogen gas.

2.6.3.4 Cryogenics Area

The Cryogenics Area included two buildings and two water storage tanks. One building was the Cryogenics Building and the other building was the Fire Pump House. The Fire Pump House was a "T"-shaped building immediately adjacent to two water storage tanks. A portion of the Fire Pump House contained an electrical generator for emergency power.

The Cryogenics Building contained two test stands, a machine shop, electric pumps and electric transformers. Specific information on the test operations for this area were not available. At a minimum, these test stands were used to conduct low-temperature tests. The Cryogenics Building was equipped with a washroom and toilet with a septic system located to the north of the building. The septic system used two septic tanks with separate leach fields. A dry well was located north-east of the building and was connected to the building's floor drains. This area was used from approximately 1957 until the buildings were demolished in 1993.

2.6.3.5 Virgin Products Storage Area

The Virgin Products Storage Area consists of six former storage yards, numbered from north to south, along with the Outside Drum Storage Area, the Quonset Hut Drum Storage Area, and the Barrel Storage Shed. The Outside Drum Storage Area was a fenced asphalt-paved area covering approximately 32,000 square feet with a small shed in the northwest corner.

The Quonset Hut Drum Storage Area included a Quonset Hut and an asphalt-paved outside drum storage area (located immediately south of the Quonset Hut). The Quonset Hut was a 40 feet by 88 feet corrugated metal building on asphalt pavement. The Quonset Hut was used for the storage of miscellaneous equipment including gasoline-driven snowblowers, lawn mowers, and yard tools. Presently, only the foundation remains. The Barrel Storage Shed was a small open-sided roofed shed. The shed was a 10 feet by 20 feet wood building used for storage.

The outside drum storage areas were used primarily for storing drums of oil products. Small quantities of flammable liquids were also stored in these areas, based on a review of facility fire-protection maps. Drums were observed on facility aerial photographs to be stored upright and stacked on their sides on asphalt pavement. Staining of the pavement and adjacent grass area was also observed on aerial photographs.

Each of the six storage yards is approximately 200 feet by 400 feet in size, and is partially paved. Based on historical information, including aerial photographs, each of the six storage areas had a different use and history. Storage Area 1 was used to store casting molds, wooden crates, various equipment, and other metal debris. Storage Area 2 was used for the storage of virgin product used in the manufacturing operations. Drums were stored upright and stacked on their sides in the past. Storage Area 3 consisted of a former outdoor storage area for drums of waste products, salvage vehicles, trays/chutes (apparently for the drying and transporting of machine parts), outdoor overhead lamp posts and fixtures. Storage Area 4 contained steel girders and frame members, "I"-beam winch supports and electric winches. Storage Area 5 contained painted steel "I"-beams and box girders. Storage Area 6 contained sealed crates.

2.6.3.6 X-307 Area

The X-307 test stand was first built in approximately 1957. This stand consisted of a test stand and a control house. In 1967, the original test stand was replaced with a larger facility consisting of a sunken building and a test stand. The building was built so it would not interfere with sound surveys conducted around the test stand. This test stand was equipped with a washroom and toilet with a septic system located to the east of the test stand.

This was a specialized outdoor test stand designed for sound surveys, limited performance testing, and crosswind testing of full-scale engines. In this area, various engine tests were conducted which required the use of jet fuels and cleaning solvents. The replacement test stand was demolished in 1993.

2.6.3.7 South Klondike Undeveloped Land Area

The undeveloped land east and south of the developed portion of the South Klondike encompasses an area of approximately 47 acres. This is a wooded area that has not been developed as part of the P&W operations conducted at the Site. P&W has not used this area for any production, testing, or ancillary activities.

2.6.4 South Airport Area

The South Airport Area is an approximately 135 acre area that generally includes the southern end of the airport to the southern most edge of the property. The South Airport Area consists of five sub-areas comprised of a total of five environmental units that are described in five USTMs. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the

breakdown of the USTMs is included in Table 1. The layout of the South Airport Area is shown on Drawing 1. A brief description of the five sub-areas is provided below.

2.6.4.1 Fire Training Area B

Fire Training Area B, which was used from the early-1950s to the mid-1970s, was near the present control tower in the South Airport Area. Flammable and combustible materials were used in the fire training exercises for the airport crash response team. Overall, Fire Training Area B was an unpaved area which measured approximately 1,500 feet by 300 feet with the actual combustion area being much smaller. An earthen pit, approximately 40 feet in diameter, was filled with water prior to fire-fighting training exercises. A mock airplane fuselage is clearly visible in various aerial photographs.

2.6.4.2 South Airport Fill Area

The South Airport Fill Area is an extensive area of fill with smaller areas of fill nearby. The ground surface in this area was observed to contain various debris including asphalt, brick, concrete, and clay tile pipe. Debris was also visible along the banks of an unnamed brook on the west, and along the banks of Pewterpot Brook on the south. The source for the fill and debris is unknown.

2.6.4.3 Tank Trailer Storage Area

This area is utilized for the storage of empty box trailers and bulk liquid tank trailers. The bulk liquid tank trailers are used by P&W for the transportation of hazardous waste and fuels. Various pieces of equipment is also stored in this area, including engines in a fenced area, stands for holding engines, and miscellaneous metal equipment.

2.6.4.4 Contractor Storage Area

The Contractor Storage Area consisted of a series of small paved areas enclosed with chain-link fencing which were used as marshaling areas for various contractors doing work at the Main Street facility. Many of these areas were used to store box trailers for the storage of equipment. Relatively small quantities of fuels, paints, and cleaning fluids were stored in sheds or trailers. This area has been used since 1970 and is still being used today to a limited degree.

2.6.4.5 Former Storage Area

The Former Storage Area was a one-time, temporary soil stockpile area at the Main Street facility. Contaminated soil excavated during the removal of USTs was temporarily stored in an area south of Rentschler Airport. The UST removals took place between January and April 1989 with contaminated soil generated during the removal activities stockpiled for approximately six months prior to being transported off the site for disposal. The contaminated soil had been impact by virgin solvent (i.e., tetrachloroethene and trichloroethene), petroleum-based fuels and lubricating products

The Former Storage Area consisted of five stockpiles for temporary on-site storage of contaminated soil and covered an approximately 40 feet by 120 feet area. Each soil pile was located in a bermed area, lined and covered with six-millimeter polyethylene sheeting. Only two of the five piles (designated Soil Pile Nos. 1 and 2) were used for storage of soil that contained hazardous waste (i.e., U210, U220, U226, U228, and U239). However, the exact storage location of these two piles of soil containing hazardous waste within the area covered by all five soil piles is unknown. Therefore, the entire 40 foot by 120 foot temporary soil storage area, identified as the Former Storage Area, is addressed as a regulated unit under the Resource Conservation and Recovery Act (RCRA).

Presently, the Former Storage Area is vacant and surrounded by a four-foot snow fence. P&W plans to complete clean closure of the Former Storage Area prior to the sale or transfer of the property. Accordingly, P&W has conducted a soil sampling and analysis program focused on the constituents of concern and possible exposure pathways discussed in the RCRA Closure Plan to support the clean closure.

2.7 Previous Investigations

The Airport/Klondike Area has been the subject of specific investigations and included in site-wide investigations related to environmental conditions since the mid 1960's. These reports and other sources of information were reviewed in an attempt to consolidate the information and evaluate the coverage to determine the focus of future investigations. Other smaller reports and work in progress provided additional supporting data. A listing of reports for investigations conducted in the Airport/Klondike Area is included in the References at the end of this report.

Available information has been included in the USTMs for each of the environmental units. Much of the history of the use of these environmental units was found in the previous investigation reports. Other supporting information came from facility files or personal

communications. This information was compiled from all of the available resources and included in the USTMs. A listing of specific references utilized in preparation of the USTMs has also been included at the end of each individual USTM. These USTMs are presented in separate volumes. Generally, the history each unit is well documented. However, specific details regarding the operation of these units was not always available. Information on the review of available data was discussed previously.

In 1990, Westinghouse Environmental and Geotechnical Services, Inc. (Westinghouse) completed a Current Assessment Summary (CAS) for the Main Street facility. Subsections of this report addressed the Airport/Klondike Areas. Concurrent with the preparation of the CAS, Westinghouse also prepared a Preliminary Reconnaissance Survey of the Airport/Klondike Area. The work by Westinghouse included documentation of past uses, field reconnaissance, an electromagnetic survey, a seismic refraction survey, aquifer testing, and soil and groundwater sampling associated with soil boring and monitoring well installations.

In 1992 and 1993, Haley & Aldrich, Inc. (H&A) completed a Site-wide Environmental Monitoring Report for the Main Street facility. The work by H&A included soil and groundwater sampling associated with soil boring and monitoring well installations. Subsections of the H&A report discussed analytical results of subsurface, groundwater, surface water and sediment samples collected during the investigation activities.

Later in 1992 and 1993, Metcalf & Eddy, Inc. (M&E) completed Site Investigation Reports for the Airport/Klondike Area. The activities by (M&E) included a review of background data, a walk-through inspection, and environmental sampling. The environmental sampling included sampling and analysis of surface water, sediment, surface soil, subsurface soil, and groundwater. In these reports, the subsurface investigations focused on Fire Training Area C, the X-401 dry wells, and the X-430 Area in the North Klondike Area; the Virgin Products Storage Area (VPSA), the Cryogenics Area, and the Quonset Hut Area in the South Klondike.

In the fall of 1992, H&A conducted an Environmental Assessment at the former PCB Storage Building in the X-407 Area. The work by H&A included the collection and analysis of wipe, soil, and groundwater samples for the PCB Storage Building.

In 1994, septic systems in the Klondike Area were investigated by LEA as part of the Klondike Septic System Investigation. These septic systems included the X-410 Maintenance and Storage Building Septic System, the X-401 Locker Room Septic System, the Cryogenics Building Septic System, and the X-307 Septic System. The purpose of the investigation was to assess soil and

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groundwater conditions in the areas that may have been impacted as a result of the usage of the septic systems. Soil and groundwater sampling associated with soil boring and Geoprobe® screenpoint installations was conducted as part of this investigation.

1. UNIT-SPECIFIC TECHNICAL MEMORANDA INTRODUCTION

Unit-Specific Technical Memoranda (USTMs) that present the results of soil sampling and analysis in the vicinity of specific environmental units that were investigated, and remediated as necessary, as part of the Site investigation and remediation activities have been completed for the Airport/Klondike Area of the P&W Main Street facility. These USTMs have been prepared to aid in the identification and evaluation of sources, or potential sources, of contamination within the Airport/Klondike Area. These USTMs include pertinent background information for each of the environmental units for which a subsurface investigation, and soil remediation as necessary, was conducted. USTMs were also prepared for those units that did not warrant a subsurface investigation.

As applicable, each USTM includes the rationale for conducting any investigation activities at that location, an outline of any investigation that was performed, analytical results from the investigation, and any conclusions based on the data collected. In cases where remediation activities were conducted, each USTM also includes the rationale for conducting any remediation activities at that location, an outline of any remediation activities that were performed, the analytical results upon completion of the remediation activities, and conclusions based on the data collected.

1.1 Scope

The Airport/Klondike Area consists of 4 study areas that include the North and South Airport Areas and the North and South Klondike Areas. Within the 4 study areas addressed in this report, there are a total of 24 sub-areas. Within the 24 sub-areas, there are a total of 104 environmental units.

The USTMs have been prepared to provide the background and rationale for the subsurface investigations that have been conducted in the vicinity of the environmental units in the Airport/Klondike Area. The investigations conducted were designed primarily to address potential releases of chemicals to the subsurface soil within fifteen feet of the ground surface to satisfy the direct exposure criteria of the Connecticut Remediation Standard Regulation (RSR). The investigations were not intended to specifically address the occurrence of contamination in groundwater. Groundwater contamination is evaluated from a site-wide perspective due to the nature of groundwater movement and contaminant transport. However, to provide a comprehensive presentation of the available information, a summary of groundwater information is included in the USTMs.

1.2 Organization

Overall, the USTMs have been prepared as an integral part of the summary report prepared for the Airport/Klondike Area investigation and remediation activities. As such, the majority of information necessary for a complete understanding of the project is included in the body of the report. Presentation of the USTMs has generally been organized according to the specific area and sub-area of the Airport/Klondike Area where the environmental units are physically located. There are a total of 104 environmental units that are described in 63 USTMs. A complete listing showing the study areas, the sub-areas, the environmental units, as well as the breakdown of the USTMs is included in Table 1.

Some of the USTMs have been prepared to discuss more than one environmental unit. Such groupings have usually been due to the proximity of the units to each other and the similarity of the units. In cases where investigations activities were not warranted, all the units within a given sub-area were grouped into a single USTM. The groupings of the USTMs are shown on Table 1. Table 1 includes columns for area USTMs and individual USTMs. To indicate which type of USTM was prepared, an "X" was placed in the appropriate column. For area USTMs, the environmental units within the sub-area which were discussed in the area USTM are indicated with an "O".

The USTM presents available background information on the location, description, dates of operation, and (processes or operations for a particular environmental unit) (or units for area USTMs). This information was compiled from all available resources as discussed in more detail in Section 2 of the report. A listing of specific references utilized in preparation of the USTMs has also been included at the end of each USTM.

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The USTM is designed to present the investigation and remediation activities that have been conducted for, or in the vicinity of, an environmental unit(s). The investigation and remediation activities that were conducted for a specific USTM are presented in chronological order. Where investigation activities were incidental to the particular unit, but in close proximity, these incidental investigation activities are also discussed.

For groundwater investigation activities that were conducted during the investigation of a particular unit, such as Geoprobe® screenpoint samples completed during soil investigations, a summary of the information is provided in the USTM as part of the chronological presentation of the investigation and remediation activities. Where the groundwater investigation activities were conducted as part of the site-wide groundwater investigations, such as a round of groundwater

sampling and analysis, (a summary of the information is provided in the USTM prior to the chronological presentation of investigation and remediation activities.) A more detailed account of the groundwater sampling is included in *Technical Memorandum 3, Groundwater Sampling and Quality*.

1.3 Conventions

In the preparation of the USTMs, certain conventions were adopted to provide consistency with the presentation of the analytical data. The conventions are as discussed below.

The analytical data for soils is presented in Tables 1, 2, and 3. The Table 1's were generated directly from the database to readily illustrate the specific analyses performed on the soil samples. A summary of the soil sampling information including sample identification, location identification, depth, type, and analyses conducted is included in Table 1. In the specific instance where a groundwater investigation, in the form of Geoprobe® screenpoint samples, was conducted concurrent with the soil sampling investigation analytical data for the groundwater samples will be presented in Tables 1, 4, and 5. In the case where a subsurface investigation was conducted for both soil and groundwater, Table 1 includes a summary of both soil and groundwater sampling information. The specific category designations noted in the table include:

- portable GC -- volatile organic compounds analyzed at a mobile laboratory (i.e., LEA Analytical Laboratory)
- Volatile Organics -- volatile organic compounds analyzed at an offsite fixed laboratory
- Semivolatile Organics -- semivolatile organic compounds
- Herbicides -- herbicides
- Pesticides -- pesticides
- PCBs -- polychlorinated biphenyls
- Metals -- analysis for one or more total metals
- Extraction -- analysis by either the synthetic precipitation leaching procedure (SPLP) or the toxicity characteristic leaching procedure (TCLP)
- Miscellaneous -- category which includes miscellaneous analyses not otherwise categorized such as cyanides, total petroleum hydrocarbons, etc.

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For Table 1's, an "X" indicates that a sample was analyzed for the given analyte class with at least one constituent over the detection limit. An "x" indicates that a sample was analyzed for the given analyte class with no constituents over the detection limit.

Concentrations of all constituents detected in the soil samples collected and analyzed for the particular environmental unit(s) are presented in the Table 2 presented in a particular USTM. The concentrations of all constituents analyzed in the soil samples collected and analyzed along with the detection limits for constituents not detected are presented in Table 3. In the case where a subsurface investigation was conducted for both soil and groundwater, Tables 4 and 5 contain similar information to Tables 2 and 3, respectively, for groundwater samples.

The USTMs provide an evaluation of the soil data against the applicable default numeric criteria established pursuant to the RSR. The criteria are established in the RSR based on exposure pathways for various environmental media, including soil and groundwater. (The evaluation of the soils data is based on a comparison to the residential and industrial/commercial direct exposure criteria (DEC), the GB pollutant mobility criteria (PMC) included in the RSR, as well) as the site-specific background soil concentrations. For a more detailed discussion of background concentrations of metals in soils refer to *Technical Memorandum 4, Background Soil Data*.

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**UNIT-SPECIFIC TECHNICAL MEMORANDUM: RENTSCHLER AIRPORT
RUNWAY AREA
PRATT & WHITNEY, EAST HARTFORD, CT**

AREA: North and South Airport

SUB-AREA: Rentschler Airport

ENVIRONMENTAL UNIT: Rentschler Airport Runway Area

Location: The Rentschler Airport Runway Area is located to the east of the main facility, west of the Klondike Areas, south of Silver Lane, and north of Brewer Street (Drawing 1). It does not include the following environmental units in the South Airport: Fire Training Area B, Contractor Storage Area, Former Storage Area, Tank Trailer Storage Area, and the South Airport Fill Area. It does not include the following sub-area and environmental unit in the North Airport, respectively: the Silver Lane Pickle Company and the Former Army Barracks Septic Systems. The locations of these aforementioned environmental units and sub-areas are included on Drawing 1. All of these listed areas have been investigated independently and should be referred to separately.

Description: The Rentschler Airport Runway Area was developed over the years and presently consists mainly of two runways, each approximately one-mile long, running north to south and northeast to southwest. Based on available drawings, there is a drainage system in the Rentschler Airport. The northern portion of the North Airport drains into Willow Brook. The rest of Rentschler Airport eventually drains into Pewterpot Brook.

Dates of Operation: The Rentschler Airport Runway Area was originally built in 1931, expanded over the years, and eventually closed in December 1994.

Processes: The Runway Area was used for the take-off and landing of a variety of commercial and military aircraft. Fueling and miscellaneous aircraft repair operations were conducted in other areas of the site. The fueling and repair operations would have been conducted at the South Klondike Tie-Down Area and the airport hangars (Drawing 1).

Aerial Photographs: Large-scale aerial photographs for 1965, 1970, and 1975 were obtained from Keystone Aerial Surveys Inc. A large-scale aerial photograph for 1980 was obtained from AeroGraphics Corporation. Based on these photographs, there is no evidence of any storage areas, staining, or repair areas in the Rentschler Airport Runway Area.

Specific Contaminants of Concern: The constituents of concern for the Rentschler Airport Runway Area are jet fuels and aviation gasoline. Analyses have been conducted for: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, beryllium, nickel, and zinc), polychlorinated biphenyls (PCBs), and total petroleum hydrocarbons (TPH). Analyses for these constituents was conducted in order to be as comprehensive as possible during the investigation activities incidental to the Runway Area.

Potential Release Mechanism: The most likely release mechanism in the Runway Area is potential spillage that could have affected the underlying soil and groundwater. However, the likelihood of a spill is low in this area, since fueling and miscellaneous aircraft repair operations were conducted elsewhere. The fueling and repair operations would have been conducted at the South Klondike Tie-Down Area and the airport hangars. The Tie-Down Area has been investigated independently and should be referred to separately. The hangars are located to the northwest of the Airport/Klondike Area and are not part of the Site.

INVESTIGATION AND REMEDIATION ACTIVITIES:

Various historical investigations have been conducted within the Rentschler Airport Runway Area as part of investigations unrelated to the Runway Area. These incidental investigations have generated analytical data in the immediate vicinity of the Runway Area. In order to be as comprehensive as possible, presentation of this data is included below in chronological order.

These incidental investigations were conducted in December 1989, February 1990, May 1993, and August 1996. Due to the potential for a release associated with this unit resulting from the placement of impacted fill, a subsurface investigation to determine the degree and extent of soil contamination was performed in November 1997. Prior to 1989, no investigations had reportedly been performed.

Supplemental groundwater investigations have also been conducted in the Rentschler Airport Runway Area since 1990. Nine monitoring wells and ten of fifteen piezometers have been sampled in the immediate vicinity of the North and South Airport Areas. The monitoring well and piezometer locations are shown on Drawing 1.

Some low-level concentrations of VOCs have been noted for the Rentschler Airport Runway Area. VOCs detected in groundwater have included chloroform (CFM), methylene chloride (MC), methyl-tert-butyl-ether (MTBE), tetrachloroethylene (PCE), 1,1,2,2-tetrachloroethane (1122TCA), 1,1,1-trichloroethane (TCA), and toluene (TL). No VOCs were detected at concentrations greater than fifteen micrograms per liter in the groundwater samples that were analyzed. Minimal concentrations of TPH, less than one milligram per liter, were noted in the groundwater samples that have been analyzed. No detectable concentrations of SVOCs were noted in the groundwater samples that have been analyzed from the Rentschler Airport Runway Area.

Elevated concentrations of metals have been detected in three of the monitoring wells. Elevated concentrations of lead have been detected in both NA-MW-03 and NA-MW-04. Elevated concentrations of arsenic, lead, mercury, and zinc have also been detected in groundwater samples from SK-MW-08D. For a more detailed account of these sampling events refer to *Technical Memorandum 3, Groundwater Sampling and Quality*.

1989 through 1993 Investigations (Westinghouse and Metcalf & Eddy):

Description: On December 4 and 5, 1989 an electromagnetic terrain conductivity survey was performed along the northeast-southwest runway in the Rentschler Airport Runway Area by

Westinghouse Environmental and Geotechnical Services, Inc. (Westinghouse). The seismic survey location is shown on Drawing 1 (Westinghouse, 1990). This survey was performed using a Geonics, Ltd. EM-31 terrain conductivity meter. This investigation was conducted as part of a site-wide EM-31 seismic survey conducted by Westinghouse.

Within the Rentschler Airport Area, one soil sample was collected during monitoring well installations completed by Westinghouse in 1990. A soil sample was collected at SK-MW-08S and analyzed for VOCs. This sampling location is shown on Drawing 1.

During a Metcalf & Eddy, Inc. (M&E) 1993 investigation, two soil samples were collected during the installation of monitoring SK-MW-16. These soil samples were analyzed for: VOCs, PCBs, metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, beryllium, nickel, and zinc) by mass analysis methodologies, leachable metals (chromium, lead, and nickel) by the Toxicity Characteristic Leaching Procedure (TCLP), and TPH. A summary of the samples collected and analyses performed is included in Table 1. The sampling locations are shown on Drawing 1.

Investigation Results: The seismic survey line along the northeast-southwest runway indicated a number of instances where the console meter deflected below "0" on the conductivity scale. This phenomenon is caused when the EM-31 passes over a highly conductive or resistive object. In all but three of the instances of "0" anomalies along the northeast-southwest runway, there was evidence of a nearby utility conduit (i.e. drainpipe, power line, or gas line) that likely caused the anomaly (Westinghouse, 1990).

Only one VOC was detected in the soil sample collected from SK-MW-08S. Concentrations of constituents detected in soil samples collected are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Methylene chloride (MC) was detected at a concentration close to the method detection limit in this sample. No other VOCs were detected in the soil sample that was submitted for laboratory analysis.

Barium, chromium, lead, nickel, and zinc were the only metals detected in the soil samples submitted for laboratory analysis during the 1993 investigation. The reported mass concentrations of metals were similar to site-wide background mass concentrations of metals (Fuss & O'Neill, 1994). For a more detailed discussion of background concentrations of metals in soils refer to *Technical Memorandum 4, Background Soil Data*. No VOCs, PCBs, or TPH were detected in the soil samples submitted during this investigation. Concentrations of constituents detected in soil samples collected are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3.

Data Evaluation and Conclusions: With regards to the 1989 seismic survey conducted along the northeast-southwest runway the three unknown anomalies may have been caused by conduits with no visible surface expression (Westinghouse, 1990).

The analytical data generated from the incidental historical investigations conducted in 1990 and 1993 indicated that minimal future investigations were warranted in the Rentschler Runway Area due to the lack of significant contaminant detects in the soil samples that were analyzed.

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1996 Investigation (Loureiro Engineering Associates):

results?
→ **Description:** During a Loureiro Engineering Associates, P.C. (LEA) 1996 investigation, soil samples were collected during the installation of SK-MW-23. Installation of this monitoring well and the collection of the soil samples were incidental activities in regards to the Rentschler Airport Runway Area. Soil samples were collected in continuous two-foot intervals to a depth of sixteen feet. A total of eight soil samples were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs (benzene (BZ), ethylbenzene (EBZ), tetrachloroethylene (PCE), toluene (TL), 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and xylenes (XYL)))

evidence that VOCs were present?
(Based on visual, olfactory, or instrument evidence, two samples were submitted to Averill Environmental Laboratory, Inc. (AEL) for analysis. These soil samples were analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, PCBs by EPA Method 8082, metals (arsenic, barium, cadmium, chromium, lead, mercury, nickel, selenium, silver, and zinc) by mass analysis methodologies, and TPH by EPA Method 418.1. A summary of the samples collected and analyses performed is included in Table 1. The sampling location is shown on Drawing 1.

Investigation Results: Concentrations of constituents detected in soil samples are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Target VOCs were not detected in any of the soil samples submitted to the LEA Analytical Laboratory. Of the two soil samples submitted to AEL, acetone (ACT) was the only VOC detected. ACT was detected in the soil sample from the 2 to 4 foot sample interval.

There were various metals detected in both of the soil samples analyzed by mass analysis methodologies. The various metals detected by mass analysis methodologies were barium, chromium, and zinc. No SVOCs, PCBs, or TPH were detected in the two soil samples that were submitted to AEL for laboratory analysis.

Data Evaluation and Conclusions: ACT is a common laboratory contaminant and is not necessarily indicative of a release from this unit. The concentrations of the metals detected in the soil samples are typical of site-wide background concentrations of metals (Fuss & O'Neill, 1994), and are not indicative of a release from this unit. For a more detailed discussion of background concentrations of metals in soils refer to *Technical Memorandum 4, Background Soil Data*.

The incidental analytical data generated from the 1996 LEA monitoring well installation activities indicated that minimal future investigations were warranted in the Rentschler Airport Runway Area due to the lack of significant contaminants detected in the soil samples that were analyzed.

November 1997 Investigation (LEA):

Description: During airport expansion activities conducted at various times, fill was placed in low-lying areas of the North Airport. In order to investigate the potential for contaminated fill used in these low-lying areas, thirty-nine Geoprobe® soil borings, NA-SB-63 through NA-SB-101, were advanced to a depth of four feet in suspected low-lying portions of the North Airport.

These low-lying areas were primarily identified from historical aerial photographs. The sampling locations are shown on Drawing 1.

During the completion of these borings, soil samples were collected for visual inspection. When visual or instrument evidence indicated potential contamination, samples would be collected in two-foot intervals to a depth of sixteen feet or to the clay layer, which ever came first. Samples would then be screened for target VOCs in the LEA Analytical Laboratory and at least one sample per boring would have been submitted for laboratory analysis of VOCs, PCBs, SVOCs, TPH, and metals, in order to be as comprehensive as possible in the investigation that was conducted.

Investigation Results: Based on visual and instrument evidence, contaminated fill was not encountered during this investigation. Therefore, no samples were collected for subsequent laboratory analysis.

Data Evaluation and Conclusions: No further investigation is warranted in the Rentschler Airport Runway Area due to the low likelihood of a release, laboratory analyses from incidental investigations, and the lack of visual and instrument evidence, indicating that jet fuel or aviation gasoline contamination is not present.

Furthermore, the network of groundwater sampling locations, as shown on Drawing 1, located in the Rentschler Airport Runway Area provides groundwater analytical data on the lack of jet fuel or aviation gasoline impacts to groundwater.

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TABLES

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Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit
2. Printed on 04/20/98

Page 1 of 1

Notes: 1. Only Detects Shown
2. Printed on 04/20/98

Why aren't SA-MW-01 + SA-MW-02I included anymore?
Fig one shows (02I?) not 02I - or where is MW02I?

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Rentschler Airport Area

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	Location ID	SK-MW-08S	SK-MW-16	SK-MW-16	SK-MW-16	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	CAS10090	02165051393	02169051393	02169051393	1017651	1017652	1017652
	Sample Date	02/16/1990	05/13/1993	05/13/1993	05/13/1993	08/26/1996	08/26/1996	08/26/1996
	Sample Time	:				10:20	10:30	10:30
	Sample Depth	9.0'				0' - 2'	2' - 4'	2' - 4'
	Laboratory	NETA	ENS	ENS	ENS	LEA	AEL	LEA
	Lab. Number	NETA09014	0286960001SA	0286960002SA	0290040017SA	96-4231-183	AEL96009661	96-4232-184
Constituent	Units							
Date Metals Analyzed	-			05/26/1993			09/05/1996	
Date Organics Analyzed	-		05/24/1993			08/28/1996	09/05/1996	08/28/1996
Date PCBs Analyzed	-			05/24/1993			09/16/1996	
Date Semi-volatile Organics Analyzed	-						09/27/1996	
Date of Metals TCLP Analysis	-				06/17/1993			
Arsenic	mg/kg			<0.59			<1.11	
Barium	mg/kg			13.8			20.4	
Beryllium	mg/kg			<0.23				
Cadmium	mg/kg			<0.59			<3.32	
Chromium	mg/kg						8.97	
Chromium (Total)	mg/kg			5.6				
Chromium (Total) (TCLP)	mg/l				<0.010			
Lead	mg/kg			2.5			<22.1	
Lead (TCLP)	mg/l				<0.050			
Mercury	mg/kg			<0.12			<0.221	
Nickel	mg/kg			6.4			<11.1	
Nickel (TCLP)	mg/l				<0.040			
Selenium	mg/kg			<0.59			<1.11	
Silver	mg/kg			<1.2			<5.53	
Zinc	mg/kg			12.0			19.3	
PCB 1016	µg/kg			<9.7			<220	
PCB 1221	µg/kg			<9.7			<220	
PCB 1232	µg/kg			<9.7			<220	
PCB 1242	µg/kg			<9.7			<220	
PCB 1248	µg/kg			<9.7			<220	
PCB 1254	µg/kg			<9.7			<220	
PCB 1260	µg/kg			<9.7			<220	
Corrosivity	µnits			6.9				

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	SK-MW-08S	SK-MW-16	SK-MW-16	SK-MW-16	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	CAS10090	02165051393	02169051393	02169051393	1017651	1017652	1017652
	Sample Date	02/16/1990	05/13/1993	05/13/1993	05/13/1993	08/26/1996	08/26/1996	08/26/1996
	Sample Time	:				10:20	10:30	10:30
	Sample Depth	9.0'				0' - 2'	2' - 4'	2' - 4'
	Laboratory	NETA	ENS	ENS	ENS	LEA	AEL	LEA
	Lab. Number	NETA09014	0286960001SA	0286960002SA	0290040017SA	96-4231-183	AEL96009661	96-4232-184
Constituent	Units							
Cyanide (Reactive)	mg/kg			<0.12				
Ignitability	deg f			<ND				
Sulfide (Reactive)	mg/kg			<1.2				
Total Petroleum Hydrocarbons	mg/kg			<23			<38.3	
Acenaphthene	µg/kg						<380	
Acenaphthylene	µg/kg						<380	
Anthracene	µg/kg						<380	
Benztidine	µg/kg						<380	
Benzo[a]anthracene	µg/kg						<380	
Benzo[a]pyrene	µg/kg						<380	
Benzo[b]fluoranthene	µg/kg						<380	
Benzo[ghi]perylene	µg/kg						<380	
Benzo[k]fluoranthene	µg/kg						<380	
Bis(2-chloroethoxy)methane	µg/kg						<380	
Bis(2-chloroethyl) Ether	µg/kg						<380	
Bis(2-ethylhexyl)phthalate	µg/kg						<380	
Bromophenyl Phenyl Ether, 4-	µg/kg						<380	
Butyl Benzyl Phthalate	µg/kg						<380	
Chloronaphthalene, 2-	µg/kg						<380	
Chlorophenol, 2-	µg/kg						<380	
Chlorophenyl Phenyl Ether, 4-	µg/kg						<380	
Chrysene	µg/kg						<380	
Di-n-butyl Phthalate	µg/kg						<380	
Di-n-octyl Phthalate	µg/kg						<380	
Dibenzo[a,h]anthracene	µg/kg						<380	
Dichlorobenzidine, 3,3'-	µg/kg						<380	
Dichlorophenol, 2,4-	µg/kg						<380	
Diethyl Phthalate	µg/kg						<380	

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SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	SK-MW-08S	SK-MW-16	SK-MW-16	SK-MW-16	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	CAS10090	02165051393	02169051393	02169051393	1017651	1017652	1017652
	Sample Date	02/16/1990	05/13/1993	05/13/1993	05/13/1993	08/26/1996	08/26/1996	08/26/1996
	Sample Time	:				10:20	10:30	10:30
	Sample Depth	9.0'				0' - 2'	2' - 4'	2' - 4'
	Laboratory	NETA	ENS	ENS	ENS	LEA	AEL	LEA
	Lab. Number	NETA09014	0286960001SA	0286960002SA	0290040017SA	96-4231-183	AEL96009661	96-4232-184
Constituent	Units							
Dimethyl Phthalate	µg/kg						<380	
Dimethylphenol,2,4-	µg/kg						<380	
Dinitro-o-cresol,4,6-	µg/kg						<380	
Dinitrophenol,2,4-	µg/kg						<380	
Dinitrotoluene,2,4-	µg/kg						<380	
Dinitrotoluene,2,6-	µg/kg						<380	
Diphenylhydrazine,1,2-	µg/kg						<380	
Fluoranthene	µg/kg						<380	
Fluorene	µg/kg						<380	
Hexachlorobenzene	µg/kg						<380	
Hexachlorobutadiene	µg/kg						<380	
Hexachlorocyclopentadiene	µg/kg						<380	
Hexachloroethane	µg/kg						<380	
Indeno(1,2,3-cd)pyrene	µg/kg						<380	
Isophorone	µg/kg						<380	
N-nitroso-n-propylamine	µg/kg						<380	
N-nitrosodimethylamine	µg/kg						<380	
N-nitrosodiphenylamine	µg/kg						<380	
Naphthalene	µg/kg						<380	
Nitrobenzene	µg/kg						<380	
Nitrophenol,2-	µg/kg						<380	
Nitrophenol,4-	µg/kg						<380	
Pentachlorophenol	µg/kg						<380	
Phenanthrene	µg/kg						<380	
Phenol	µg/kg						<380	
Propane,2,2'-oxybis(2-chloro-	µg/kg						<380	
Pyrene	µg/kg						<380	
Trichlorobenzene,1,2,4-	µg/kg						<380	

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SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	SK-MW-08S	SK-MW-16	SK-MW-16	SK-MW-16	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	CAS10090	02165051393	02169051393	02169051393	1017651	1017652	1017652
	Sample Date	02/16/1990	05/13/1993	05/13/1993	05/13/1993	08/26/1996	08/26/1996	08/26/1996
	Sample Time	:				10:20	10:30	10:30
	Sample Depth	9.0'				0' - 2'	2' - 4'	2' - 4'
	Laboratory	NETA	ENS	ENS	ENS	LEA	AEL	LEA
	Lab. Number	NETA09014	0286960001SA	0286960002SA	0290040017SA	96-4231-183	AEL96009661	96-4232-184
Constituent	Units							
Trichlorophenol,2,4,6-	µg/kg						<380	
Acetone	µg/kg						150	
Acrolein	µg/kg						<18	
Acrylonitrile	µg/kg						<18	
Benzene	µg/kg	<5	<51				<7.1	
Benzene (mobile)	µg/kg					<8		<7
Bromobenzene	µg/kg						<7.1	
Bromoform	µg/kg	<5	<510				<7.1	
Carbon Disulfide	µg/kg	<5					<7.1	
Carbon Tetrachloride	µg/kg	<5	<51				<7.1	
Chlorobenzene	µg/kg	<5	<250				<7.1	
Chlorodibromomethane	µg/kg	<5	<100				<7.1	
Chloroethane	µg/kg	<5	<510				<7.1	
Chloroethyl Vinyl Ether,2-	µg/kg						<7.1	
Chloroform	µg/kg	<5	<51				<7.1	
Chlorotoluene,o-	µg/kg						<7.1	
Chlorotoluene,p-	µg/kg						<7.1	
Dibromomethane	µg/kg						<7.1	
Dichlorobenzene,1,2-	µg/kg		<51				<7.1	
Dichlorobenzene,1,3-	µg/kg		<51				<7.1	
Dichlorobenzene,1,4-	µg/kg		<51				<7.1	
Dichlorobromomethane	µg/kg	<5	<100				<7.1	
Dichlorodifluoromethane	µg/kg						<7.1	
Dichloroethane,1,1-	µg/kg	<5	<51				<7.1	
Dichloroethane,1,2-	µg/kg	<5	<100				<7.1	
Dichloroethylene,1,1-	µg/kg	<5	<51				<7.1	
Dichloroethylene,1,2-	µg/kg		<51					
Dichloroethylene,1,2-cis-	µg/kg						<7.1	

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SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	SK-MW-08S	SK-MW-16	SK-MW-16	SK-MW-16	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	CAS10090	02165051393	02169051393	02169051393	1017651	1017652	1017652
	Sample Date	02/16/1990	05/13/1993	05/13/1993	05/13/1993	08/26/1996	08/26/1996	08/26/1996
	Sample Time	:				10:20	10:30	10:30
	Sample Depth	9.0'				0' - 2'	2' - 4'	2' - 4'
	Laboratory	NETA	ENS	ENS	ENS	LEA	AEL	LEA
	Lab. Number	NETA09014	0286960001SA	0286960002SA	0290040017SA	96-4231-183	AEL96009661	96-4232-184
Constituent	Units							
Dichloroethylene, 1,2-trans-	µg/kg	<5					<7.1	
Dichloropropane, 1,2-	µg/kg	<5	<100				<7.1	
Dichloropropylene, 1,3-cis-	µg/kg	<5	<200				<7.1	
Dichloropropylene, 1,3-trans-	µg/kg	<5	<100				<7.1	
Ethylbenzene	µg/kg	<5	<51				<7.1	
Ethylbenzene (mobile)	µg/kg					<17		<15
Ethylene Dibromide	µg/kg		<780					
Hexanone, 2-	µg/kg	<5					<18	
Methyl Bromide	µg/kg	<5	<510				<7.1	
Methyl Chloride	µg/kg	<5	<510				<7.1	
Methyl Ethyl Ketone	µg/kg	<5					<18	
Methyl-2-pentanone, 4-	µg/kg	<5					<18	
Methyl-tert-butyl Ether	µg/kg						<7.1	
Methylene Chloride	µg/kg	10	<510				<8.9	
Styrene	µg/kg	<5					<7.1	
Tetrachloroethane, 1,1,1,2-	µg/kg						<7.1	
Tetrachloroethane, 1,1,2,2-	µg/kg	<5	<100				<7.1	
Tetrachloroethylene	µg/kg	<5	<51				<7.1	
Tetrachloroethylene (mobile)	µg/kg					<21		<19
Toluene	µg/kg	<5	<51				<7.1	
Toluene (mobile)	µg/kg					<12		<10
Trichloro-1,2,2-trifluoroethane, 1,1,2-	µg/kg		<100					
Trichloroethane, 1,1,1-	µg/kg	<5	<51				<7.1	
Trichloroethane, 1,1,1- (mobile)	µg/kg					<211		<185
Trichloroethane, 1,1,2-	µg/kg	<5	<100				<7.1	
Trichloroethylene	µg/kg	<5	<51				<7.1	
Trichloroethylene (mobile)	µg/kg					<21		<18
Trichloromonofluoromethane	µg/kg						<7.1	

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	Location ID	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	1017653	1017654	1017654	1017655	1017656	1017657	1017658
	Sample Date	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996
	Sample Time	10:50	10:55	10:55	11:00	11:10	11:15	11:20
	Sample Depth	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	14' - 16'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-4233-186	AEL96009662	96-4234-187	96-4235-188	96-4236-189	96-4237-190	96-4238-191
Constituent	Units							
Date Metals Analyzed	-		09/05/1996					
Date Organics Analyzed	-	08/28/1996	09/05/1996	08/28/1996	08/28/1996	08/28/1996	08/28/1996	08/28/1996
Date PCBs Analyzed	-		09/16/1996					
Date Semi-volatile Organics Analyzed	-		09/27/1996					
Date of Metals TCLP Analysis	-							
Arsenic	mg/kg		<1.23					
Barium	mg/kg		17.6					
Beryllium	mg/kg							
Cadmium	mg/kg		<3.7					
Chromium	mg/kg		<6.16					
Chromium (Total)	mg/kg							
Chromium (Total) (TCLP)	mg/l							
Lead	mg/kg		<24.7					
Lead (TCLP)	mg/l							
Mercury	mg/kg		<0.247					
Nickel	mg/kg		<12.3					
Nickel (TCLP)	mg/l							
Selenium	mg/kg		<1.23					
Silver	mg/kg		<6.16					
Zinc	mg/kg		12.8					
PCB 1016	µg/kg		<240					
PCB 1221	µg/kg		<240					
PCB 1232	µg/kg		<240					
PCB 1242	µg/kg		<240					
PCB 1248	µg/kg		<240					
PCB 1254	µg/kg		<240					
PCB 1260	µg/kg		<240					
Corrosivity	units							

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	Location ID	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	1017653	1017654	1017654	1017655	1017656	1017657	1017658
	Sample Date	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996
	Sample Time	10:50	10:55	10:55	11:00	11:10	11:15	11:20
	Sample Depth	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	14' - 16'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-4233-186	AEL96009662	96-4234-187	96-4235-188	96-4236-189	96-4237-190	96-4238-191
Constituent	Units							
Cyanide (Reactive)	mg/kg							
Ignitability	deg f							
Sulfide (Reactive)	mg/kg							
Total Petroleum Hydrocarbons	mg/kg		<42.0					
Acenaphthene	µg/kg		<410					
Acenaphthylene	µg/kg		<410					
Anthracene	µg/kg		<410					
Benzidine	µg/kg		<410					
Benzo[a]anthracene	µg/kg		<410					
Benzo[a]pyrene	µg/kg		<410					
Benzo[b]fluoranthene	µg/kg		<410					
Benzo[ghi]perylene	µg/kg		<410					
Benzo[k]fluoranthene	µg/kg		<410					
Bis(2-chloroethoxy)methane	µg/kg		<410					
Bis(2-chloroethyl) Ether	µg/kg		<410					
Bis(2-ethylhexyl)phthalate	µg/kg		<410					
Bromophenyl Phenyl Ether, 4-	µg/kg		<410					
Butyl Benzyl Phthalate	µg/kg		<410					
Chloronaphthalene, 2-	µg/kg		<410					
Chlorophenol, 2-	µg/kg		<410					
Chlorophenyl Phenyl Ether, 4-	µg/kg		<410					
Chrysene	µg/kg		<410					
Di-n-butyl Phthalate	µg/kg		<410					
Di-n-octyl Phthalate	µg/kg		<410					
Dibenzo[a,h]anthracene	µg/kg		<410					
Dichlorobenzidine, 3,3'-	µg/kg		<410					
Dichlorophenol, 2,4-	µg/kg		<410					
Diethyl Phthalate	µg/kg		<410					

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	Location ID	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	1017653	1017654	1017654	1017655	1017656	1017657	1017658
	Sample Date	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996
	Sample Time	10:50	10:55	10:55	11:00	11:10	11:15	11:20
	Sample Depth	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	14' - 16'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-4233-186	AEL96009662	96-4234-187	96-4235-188	96-4236-189	96-4237-190	96-4238-191
Constituent	Units							
Dimethyl Phthalate	µg/kg		<410					
Dimethylphenol, 2,4-	µg/kg		<410					
Dinitro-o-cresol, 4,6-	µg/kg		<410					
Dinitrophenol, 2,4-	µg/kg		<410					
Dinitrotoluene, 2,4-	µg/kg		<410					
Dinitrotoluene, 2,6-	µg/kg		<410					
Diphenylhydrazine, 1,2-	µg/kg		<410					
Fluoranthene	µg/kg		<410					
Fluorene	µg/kg		<410					
Hexachlorobenzene	µg/kg		<410					
Hexachlorobutadiene	µg/kg		<410					
Hexachlorocyclopentadiene	µg/kg		<410					
Hexachloroethane	µg/kg		<410					
Indeno(1,2,3-cd)pyrene	µg/kg		<410					
Isophorone	µg/kg		<410					
N-nitroso-n-propylamine	µg/kg		<410					
N-nitrosodimethylamine	µg/kg		<410					
N-nitrosodiphenylamine	µg/kg		<410					
Naphthalene	µg/kg		<410					
Nitrobenzene	µg/kg		<410					
Nitrophenol, 2-	µg/kg		<410					
Nitrophenol, 4-	µg/kg		<410					
Pentachlorophenol	µg/kg		<410					
Phenanthrene	µg/kg		<410					
Phenol	µg/kg		<410					
Propane), 2,2'-oxybis(2-chloro-	µg/kg		<410					
Pyrene	µg/kg		<410					
Trichlorobenzene, 1,2,4-	µg/kg		<410					

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	Location ID	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	1017653	1017654	1017654	1017655	1017656	1017657	1017658
	Sample Date	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996
	Sample Time	10:50	10:55	10:55	11:00	11:10	11:15	11:20
	Sample Depth	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	14' - 16'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-4233-186	AEL96009662	96-4234-187	96-4235-188	96-4236-189	96-4237-190	96-4238-191
Constituent	Units							
Trichlorophenol,2,4,6-	µg/kg		<410					
Acetone	µg/kg		<29					
Acrolein	µg/kg		<15					
Acrylonitrile	µg/kg		<15					
Benzene	µg/kg		<5.8					
Benzene (mobile)	µg/kg	<7		<8	<8	<7	<8	<8
Bromobenzene	µg/kg		<5.8					
Bromoform	µg/kg		<5.8					
Carbon Disulfide	µg/kg		<5.8					
Carbon Tetrachloride	µg/kg		<5.8					
Chlorobenzene	µg/kg		<5.8					
Chlorodibromomethane	µg/kg		<5.8					
Chloroethane	µg/kg		<5.8					
Chloroethyl Vinyl Ether,2-	µg/kg		<5.8					
Chloroform	µg/kg		<5.8					
Chlorotoluene,o-	µg/kg		<5.8					
Chlorotoluene,p-	µg/kg		<5.8					
Dibromomethane	µg/kg		<5.8					
Dichlorobenzene,1,2-	µg/kg		<5.8					
Dichlorobenzene,1,3-	µg/kg		<5.8					
Dichlorobenzene,1,4-	µg/kg		<5.8					
Dichlorobromomethane	µg/kg		<5.8					
Dichlorodifluoromethane	µg/kg		<5.8					
Dichloroethane,1,1-	µg/kg		<5.8					
Dichloroethane,1,2-	µg/kg		<5.8					
Dichloroethylene,1,1-	µg/kg		<5.8					
Dichloroethylene,1,2-	µg/kg							
Dichloroethylene,1,2-cis-	µg/kg		<5.8					

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	Location ID	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23	SK-MW-23
	Sample ID	1017653	1017654	1017654	1017655	1017656	1017657	1017658
	Sample Date	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996	08/26/1996
	Sample Time	10:50	10:55	10:55	11:00	11:10	11:15	11:20
	Sample Depth	4' - 6'	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	14' - 16'
	Laboratory	LEA	AEL	LEA	LEA	LEA	LEA	LEA
	Lab. Number	96-4233-186	AEL96009662	96-4234-187	96-4235-188	96-4236-189	96-4237-190	96-4238-191
Constituent	Units							
Dichloroethylene, 1,2-trans-	µg/kg		<5.8					
Dichloropropane, 1,2-	µg/kg		<5.8					
Dichloropropylene, 1,3-cis-	µg/kg		<5.8					
Dichloropropylene, 1,3-trans-	µg/kg		<5.8					
Ethylbenzene	µg/kg		<5.8					
Ethylbenzene (mobile)	µg/kg	<15		<18	<18	<15	<17	<18
Ethylene Dibromide	µg/kg							
Hexanone, 2-	µg/kg		<15					
Methyl Bromide	µg/kg		<5.8					
Methyl Chloride	µg/kg		<5.8					
Methyl Ethyl Ketone	µg/kg		<15					
Methyl-2-pentanone, 4-	µg/kg		<15					
Methyl-tert-butyl Ether	µg/kg		<5.8					
Methylene Chloride	µg/kg		<10					
Styrene	µg/kg		<5.8					
Tetrachloroethane, 1,1,1,2-	µg/kg		<5.8					
Tetrachloroethane, 1,1,2,2-	µg/kg		<5.8					
Tetrachloroethylene	µg/kg		<5.8					
Tetrachloroethylene (mobile)	µg/kg	<19		<22	<23	<18	<21	<23
Toluene	µg/kg		<5.8					
Toluene (mobile)	µg/kg	<10		<13	<13	<10	<12	<13
Trichloro-1,2,2-trifluoroethane, 1,1,2-	µg/kg							
Trichloroethane, 1,1,1-	µg/kg		<5.8					
Trichloroethane, 1,1,1- (mobile)	µg/kg	<185		<224	<229	<182	<211	<229
Trichloroethane, 1,1,2-	µg/kg		<5.8					
Trichloroethylene	µg/kg		<5.8					
Trichloroethylene (mobile)	µg/kg	<18		<22	<23	<18	<21	<23
Trichloromonofluoromethane	µg/kg		<5.8					

Notes: 1. Printed on 04/20/98

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Notes: 1. Printed on 04/20/98

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**SUMMARY SITE INVESTIGATION AND REMEDIATION
REPORT- SITE LOCATION MAP & ENVIRONMENTAL
UNITS- DRAWING 1**

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

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Facility Name: PRATT & WHITNEY (MAIN ST)

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Purpose Below)**

Description of Oversized Material, if applicable:

SOIL INVESTIGATIONS- X-410 SEPTIC SYSTEM
LOCATION AND CONSTITUENTS DETECTED MAP -
DRAWING 1

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

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**UNIT-SPECIFIC TECHNICAL MEMORANDUM: FORMER ARMY
BARRACKS SEPTIC SYSTEMS
PRATT & WHITNEY, EAST HARTFORD, CT**

AREA: North Airport

SUB-AREA: Rentschler Airport Former Army Barracks

ENVIRONMENTAL UNIT: Former Army Barracks Septic Systems

Location: This unit is located on the northern portion of the Rentschler Airport runway area as shown on Drawing 1.

Description: The Rentschler Airport Former Army Barracks extended from the northern end of the north-south runway westward to the present United Technology Research Center (UTRC). The Army Barracks consisted of approximately 33 buildings including barracks, mess halls, recreation halls, a dispensary, warehouses, a school, and a radio [Pratt & Whitney (P&W) Map PL-2826-D]. The typical size of the buildings was 20 feet by 100 feet. Fuel storage and vehicle maintenance areas or buildings were not indicated on the available drawing.

Sixteen septic systems of various size were installed to handle the sanitary wastewater from the various buildings. Based on the available information, eight of the septic systems were located on the northern end of Rentschler Airport and eight of the septic systems were located on UTRC property. The locations of the septic systems are shown on Drawing 1. The septic systems are shown to have consisted of a septic tank and a leaching field constructed of 4-inch vitrified clay pipe (VCP) (P&W Map PL-2826-D). The size of the septic tanks and the length of the VCP varied depending on the service requirements for a given building. The specifics on the construction details for the tanks and the leaching fields were not available.

Dates of Operation: The former barracks were operational from approximately 1942 to 1948.

Processes: Military personnel used the barracks as temporary quarters.

Aerial Photographs: Aerial photographs that included this unit were unavailable.

Specific Contaminants of Concern: No chemical usage information is available for the former Army Barracks. In order to be as comprehensive as possible in the investigation that was conducted, the following constituent groups were analyzed for: volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), metals (arsenic, barium, cadmium, chromium, mercury, nickel, selenium, silver, and zinc), and total petroleum hydrocarbons (TPH).

Potential Release Mechanism: Impacts to soils and groundwater from potential seepage through cracks or joints in the septic tanks or from the leaching fields associated with the former buildings.

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INVESTIGATION AND REMEDIATION ACTIVITIES:

Due to the potential for a release associated with this unit, a subsurface investigation to determine the degree and extent of soil contamination was performed in August 1996. Prior to 1996, no investigation had reportedly been performed. Borings were not performed for the septic systems located on UTRC property. The UTRC property is not part of the Airport/Klondike Area and was not addressed as part of these investigation and remediation activities.

August 1996 Investigation (LEA):

Description: On August 6, 1996, a geophysical investigation was conducted to determine the presence or absence of the sixteen septic systems associated with the Army Barracks. Ground Penetrating Radar (GPR) survey lines were run over fourteen of the septic system locations shown on the available drawing of the area (Pratt & Whitney Map PL-2826-D). The locations of the GPR survey lines are shown on Drawing 1. Three of the septic systems locations within the Airport/Klondike Area had GPR signatures indicating that septic systems may have been present.

On August 9, 1996, three soil borings, NA-SB-01 through NA-SB-03, were advanced in the vicinity of locations that had GPR signatures indicating the possible presence of septic systems or previously disturbed areas. The sampling locations are shown on Drawing 1. Soil samples were collected from each of the borings in continuous two-foot intervals to fourteen feet, and one-foot interval from fourteen to fifteen feet. The depth of fifteen feet was selected to ensure that sufficient data were collected for comparisons against the direct exposure criteria in the Connecticut Remediation Standard Regulation (RSR).

A total of twenty-five soil samples were submitted to the LEA Analytical Laboratory and screened for the presence of target VOCs [benzene (BZ), ethylbenzene (EBZ), tetrachloroethylene (PCE), toluene (TL), 1,1,1-trichloroethane (TCA), trichloroethylene (TCE), and xylenes (XYL)]. Based on visual, olfactory, or instrumentation evidence, and with consideration of the potential release mechanism, two samples from each of the soil borings were submitted to Averill Environmental Laboratory, Inc. (AEL). These samples were analyzed for VOCs, SVOCs, metals, and TPH. A summary of the samples collected and the analyses performed is included in Table 1.

Investigation Results: During the GPR survey, several characteristics were noted that could have been indications of septic system components. However, these indications were located on UTRC property and not P&W's property. The GPR survey of P&W's property indicated only pipe-like structures.

Based on the boring logs, groundwater was encountered at approximately five feet in the three soil borings. Varved clay was encountered at twelve feet in borings NA-SB-02 and NA-SB-03. In boring NA-SB-01, varved clay was not encountered.

Concentrations of constituents detected in soil samples collected for this unit are presented in Table 2. A complete summary of soil analytical results with detection limits is presented in Table 3. Detected concentrations at each sampling location are shown on Drawing 1. VOCs

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were not detected in the soil samples submitted to the LEA Analytical Laboratory. Similarly, VOCs, SVOCs, and TPH were not detected in the soil samples submitted to AEL.

One or more of the metals analyzed were detected in each of the soil samples submitted for analysis. These metals include arsenic, barium, cadmium, chromium, copper, nickel, and zinc.

Data Evaluation and Conclusions: The soil boring data were compared against the default numeric criteria included in the RSR and the site-wide background soil concentrations for various inorganic constituents (Fuss & O'Neill, 1994). For a more detailed discussion of background concentrations of metals in soil refer to *Technical Memorandum 4, Background Soil Data*. Criteria are established in the RSR based on exposure pathways for various environmental media, including soil and groundwater.

The concentrations of the metals detected in these samples are typical of site-wide background concentrations (Fuss & O'Neill, 1994), except for sample boring NA-SB-02 taken from 12 to 14 feet. However, the concentrations detected in this sample are typical of "Clay" background concentrations, and are not indicative of a release from this environmental unit. For the metals detected in soil, no exceedances of the default numeric residential direct exposure criteria (RDEC) or industrial/commercial direct exposure criteria (IDEC) were noted.

Based on the analytical results, there is no evidence that a release has occurred at this unit. It is believed that the area has been adequately characterized and no further action is warranted for the area near the Former Army Barracks.

REFERENCES:

Fuss & O'Neill, Inc, 1994, *Soil Sampling Background Areas – North Klondike*, prepared for Pratt & Whitney.

Loureiro Engineering Associates. October 1995. *Rentschler Airport and Klondike Areas Data Gap Investigation and Work Plan*, United Technologies Corporation, Pratt & Whitney, 400 Main Street, East Hartford, CT.

Pratt & Whitney Map PL-2826-D, November 5, 1947, *O.T.U.-Housing and Utilities, U.S. Army Area at Rentschler Field*, File Number EH-4-1019.

TABLES

Table 1
SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION
P&W East Hartford: Former Army Barracks Septic Systems

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Page 1 of 1

Sample Information						Analysis Information								
Location ID	Sample ID	Sample Date	From (ft)	To (ft)	Class	Portable GC	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides	PCBs	Metals	Extraction	Miscellaneous
NA-SB-01	1016749	8/9/96	0	2	SB	x								
NA-SB-01	1016750	8/9/96	2	4	SB	x	x	x				X		x
NA-SB-01	1016751	8/9/96	4	6	SB	x								
NA-SB-01	1016752	8/9/96	6	8	SB	x								
NA-SB-01	1016753	8/9/96	8	10	SB	x	x	x				X		x
NA-SB-01	1016754	8/9/96	10	12	SB	x								
NA-SB-01	1016755	8/9/96	12	14	SB	x								
NA-SB-01	1016756	8/9/96	14	15	SB	x								
NA-SB-02	1016757	8/9/96	0	2	SB	x	x	x				X		x
NA-SB-02	1016758	8/9/96	2	4	SB	x								
NA-SB-02	1016759	8/9/96	4	6	SB	x								
NA-SB-02	1016760	8/9/96	6	8	SB	x								
NA-SB-02	1016761	8/9/96	6	8	SB	x								
NA-SB-02	1016762	8/9/96	8	10	SB	x								
NA-SB-02	1016763	8/9/96	10	12	SB	x								
NA-SB-02	1016764	8/9/96	12	14	SB	x	x	x				X		x
NA-SB-02	1016765	8/9/96	14	15	SB	x								
NA-SB-03	1016767	8/9/96	0	2	SB	x	x	x				X		x
NA-SB-03	1016768	8/9/96	2	4	SB	x								
NA-SB-03	1016769	8/9/96	4	6	SB	x								
NA-SB-03	1016770	8/9/96	6	8	SB	x	x	x				X		x
NA-SB-03	1016771	8/9/96	8	10	SB	x								
NA-SB-03	1016772	8/9/96	10	12	SB	x								
NA-SB-03	1016773	8/9/96	12	14	SB	x								
NA-SB-03	1016774	8/9/96	14	15	SB	x								

Notes: 1. Legend: X - Analysed; at least one analyte over the detection limit; x - Analysed, no analytes in group over the detection limit

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[illegible]

Notes: 1. Only Detects Shown
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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01
	Sample ID	1016749	1016750	1016750	1016751	1016752	1016753	1016753
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	10:20	10:32	10:32	10:45	11:00	11:10	11:10
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	8' - 10'	8' - 10'
	Laboratory	LEA	AEL	LEA	LEA	LEA	AEL	LEA
	Lab. Number	96-3912-034	AEL96009074	96-3913-038	96-3914-039	96-3915-040	AEL96009075	96-3916-041
Constituent	Units							
Date Metals Analyzed	-		08/20/1996				08/20/1996	
Date Organics Analyzed	-	08/14/1996	08/20/1996	08/14/1996	08/14/1996	08/14/1996	08/20/1996	08/14/1996
Date Semi-volatile Organics Analyzed	-		08/29/1996				08/29/1996	
Arsenic	mg/kg		<1.18				<1.3	
Barium	mg/kg		16.6				9.49	
Cadmium	mg/kg		<3.53				<3.9	
Chromium	mg/kg		8.59				<6.5	
Copper	mg/kg		<5.88				<6.5	
Lead	mg/kg		<23.5				<26	
Mercury	mg/kg		<0.235				<0.26	
Nickel	mg/kg		<11.8				<13	
Selenium	mg/kg		<1.18				<1.3	
Silver	mg/kg		<5.88				<6.5	
Zinc	mg/kg		21.4				17.9	
Total Petroleum Hydrocarbons	mg/kg		<40.1				<42.3	
Acenaphthene	µg/kg		<410				<420	
Acenaphthylene	µg/kg		<410				<420	
Anthracene	µg/kg		<410				<420	
Benztidine	µg/kg		<410				<420	
Benzo[a]anthracene	µg/kg		<410				<420	
Benzo[a]pyrene	µg/kg		<410				<420	
Benzo[b]fluoranthene	µg/kg		<410 N1				<420	
Benzo[ghi]perylene	µg/kg		<410 N1				<420	
Benzo[k]fluoranthene	µg/kg		<410 N1				<420	
Bis(2-chloroethoxy)methane	µg/kg		<410				<420	
Bis(2-chloroethyl) Ether	µg/kg		<410				<420	
Bis(2-ethylhexyl)phthalate	µg/kg		<410				<420	
Bromophenyl Phenyl Ether, 4-	µg/kg		<410				<420	

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01
	Sample ID	1016749	1016750	1016750	1016751	1016752	1016753	1016753
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	10:20	10:32	10:32	10:45	11:00	11:10	11:10
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	8' - 10'	8' - 10'
	Laboratory	LEA	AEL	LEA	LEA	LEA	AEL	LEA
	Lab. Number	96-3912-034	AEL96009074	96-3913-038	96-3914-039	96-3915-040	AEL96009075	96-3916-041
Constituent	Units							
Butyl Benzyl Phthalate	µg/kg		<410				<420	
Chloronaphthalene,2-	µg/kg		<410				<420	
Chlorophenol,2-	µg/kg		<410				<420	
Chlorophenyl Phenyl Ether,4-	µg/kg		<410				<420	
Chrysene	µg/kg		<410				<420	
Di-n-butyl Phthalate	µg/kg		<810				<420	
Di-n-octyl Phthalate	µg/kg		<410				<420	
Dibenzo[a,h]anthracene	µg/kg		<410				<420	
Dichlorobenzidine,3,3'-	µg/kg		<410				<420	
Dichlorophenol,2,4-	µg/kg		<410				<420	
Diethyl Phthalate	µg/kg		<410				<420	
Dimethyl Phthalate	µg/kg		<410				<420	
Dimethylphenol,2,4-	µg/kg		<410				<420	
Dinitro-o-cresol,4,6-	µg/kg		<410				<420	
Dinitrophenol,2,4-	µg/kg		<410				<420	
Dinitrotoluene,2,4-	µg/kg		<410				<420	
Dinitrotoluene,2,6-	µg/kg		<410				<420	
Diphenylhydrazine,1,2-	µg/kg		<410				<420	
Fluoranthene	µg/kg		<410				<420	
Fluorene	µg/kg		<410				<420	
Hexachlorobenzene	µg/kg		<410				<420	
Hexachlorobutadiene	µg/kg		<410				<420	
Hexachlorocyclopentadiene	µg/kg		<410				<420	
Hexachloroethane	µg/kg		<410				<420	
Indeno(1,2,3-cd)pyrene	µg/kg		<410 N1				<420	
Isophorone	µg/kg		<410				<420	
N-nitroso-n-propylamine	µg/kg		<410				<420	
N-nitrosodimethylamine	µg/kg		<410				<420	

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01
	Sample ID	1016749	1016750	1016750	1016751	1016752	1016753	1016753
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	10:20	10:32	10:32	10:45	11:00	11:10	11:10
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	8' - 10'	8' - 10'
	Laboratory	LEA	AEL	LEA	LEA	LEA	AEL	LEA
	Lab. Number	96-3912-034	AEL96009074	96-3913-038	96-3914-039	96-3915-040	AEL96009075	96-3916-041
Constituent	Units							
N-nitrosodiphenylamine	µg/kg		<410				<420	
Naphthalene	µg/kg		<410				<420	
Nitrobenzene	µg/kg		<410				<420	
Nitrophenol,2-	µg/kg		<410				<420	
Nitrophenol,4-	µg/kg		<410				<420	
Pentachlorophenol	µg/kg		<410				<420	
Phenanthrene	µg/kg		<410				<420	
Phenol	µg/kg		<410				<420	
Propane),2,2'-oxybis(2-chloro-	µg/kg		<410				<420	
Pyrene	µg/kg		<410				<420	
Trichlorobenzene,1,2,4-	µg/kg		<410				<420	
Trichlorophenol,2,4,6-	µg/kg		<410				<420	
Acetone	µg/kg		<52				<37	
Acrolein	µg/kg		<26				<12	
Acrylonitrile	µg/kg		<26				<12	
Benzene	µg/kg		<10				<5.0	
Benzene (screening)	µg/kg	<16		<15	<14	<14		<16
Bromobenzene	µg/kg		<10				<5.0	
Bromoform	µg/kg		<10				<5.0	
Carbon Disulfide	µg/kg		<10				<5.0	
Carbon Tetrachloride	µg/kg		<10				<5.0	
Chlorobenzene	µg/kg		<10				<5.0	
Chlorodibromomethane	µg/kg		<10				<5.0	
Chloroethane	µg/kg		<10				<5.0	
Chloroethyl Vinyl Ether,2-	µg/kg		<10				<5.0	
Chloroform	µg/kg		<10				<5.0	
Chlorotoluene,o-	µg/kg		<10				<5.0	
Chlorotoluene,p-	µg/kg		<10				<5.0	

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-01
	Sample ID	1016749	1016750	1016750	1016751	1016752	1016753	1016753
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	10:20	10:32	10:32	10:45	11:00	11:10	11:10
	Sample Depth	0' - 2'	2' - 4'	2' - 4'	4' - 6'	6' - 8'	8' - 10'	8' - 10'
	Laboratory	LEA	AEL	LEA	LEA	LEA	AEL	LEA
	Lab. Number	96-3912-034	AEL96009074	96-3913-038	96-3914-039	96-3915-040	AEL96009075	96-3916-041
Constituent	Units							
Dibromomethane	µg/kg		<10				<5.0	
Dichlorobenzene, 1,2-	µg/kg		<10				<5.0	
Dichlorobenzene, 1,3-	µg/kg		<10				<5.0	
Dichlorobenzene, 1,4-	µg/kg		<10				<5.0	
Dichlorobromomethane	µg/kg		<10				<5.0	
Dichlorodifluoromethane	µg/kg		<10				<5.0	
Dichloroethane, 1,1-	µg/kg		<10				<5.0	
Dichloroethane, 1,2-	µg/kg		<10				<5.0	
Dichloroethylene, 1,1-	µg/kg		<10				<5.0	
Dichloroethylene, 1,2-cis-	µg/kg		<10				<5.0	
Dichloroethylene, 1,2-trans-	µg/kg		<10				<5.0	
Dichloropropane, 1,2-	µg/kg		<10				<5.0	
Dichloropropylene, 1,3-cis-	µg/kg		<10				<5.0	
Dichloropropylene, 1,3-trans-	µg/kg		<10				<5.0	
Ethylbenzene	µg/kg		<10				<5.0	
Ethylbenzene (screening)	µg/kg	<34		<33	<31	<31		<34
Hexanone, 2-	µg/kg		<26				<12	
Methyl Bromide	µg/kg		<10				<5.0	
Methyl Chloride	µg/kg		<10				<5.0	
Methyl Ethyl Ketone	µg/kg		<26				<12	
Methyl-2-pentanone, 4-	µg/kg		<26				<12	
Methyl-tert-butyl Ether	µg/kg		<10				<5.0	
Methylene Chloride	µg/kg		<10				<6.2	
Styrene	µg/kg		<10				<5.0	
Tetrachloroethane, 1,1,1,2-	µg/kg		<10				<5.0	
Tetrachloroethane, 1,1,2,2-	µg/kg		<10				<5.0	
Tetrachloroethylene	µg/kg		<10				<5.0	
Tetrachloroethylene (screening)	µg/kg	<42		<41	<38	<38		<43

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016754	1016755	1016756	1016757	1016757	1016758	1016759
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	11:20	11:30	11:41	12:18	12:18	12:25	12:30
	Sample Depth	10' - 12'	12' - 14'	14' - 15'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA
	Lab. Number	96-3917-042	96-3918-043	96-3919-044	AEL96009076	96-3920-045	96-3923-050	96-3924-051
Constituent	Units							
Date Metals Analyzed	-				08/20/1996			
Date Organics Analyzed	-	08/14/1996	08/14/1996	08/14/1996	08/20/1996	08/14/1996	08/15/1996	08/15/1996
Date Semi-volatile Organics Analyzed	-				08/29/1996			
Arsenic	mg/kg				2.87			
Barium	mg/kg				11.9			
Cadmium	mg/kg				<3.08			
Chromium	mg/kg				11.6			
Copper	mg/kg				10.4			
Lead	mg/kg				<20.5			
Mercury	mg/kg				<0.205			
Nickel	mg/kg				<10.3			
Selenium	mg/kg				<1.03			
Silver	mg/kg				<5.13			
Zinc	mg/kg				22.4			
Total Petroleum Hydrocarbons	mg/kg				<34.5			
Acenaphthene	µg/kg				<350			
Acenaphthylene	µg/kg				<350			
Anthracene	µg/kg				<350			
Benzidine	µg/kg				<350			
Benzo(a)anthracene	µg/kg				<350 N1			
Benzo(a)pyrene	µg/kg				<350 N1			
Benzo(b)fluoranthene	µg/kg				<350 N1			
Benzo(ghi)perylene	µg/kg				<350 N1			
Benzo(k)fluoranthene	µg/kg				<350 N1			
Bis(2-chloroethoxy)methane	µg/kg				<350			
Bis(2-chloroethyl) Ether	µg/kg				<350			
Bis(2-ethylhexyl)phthalate	µg/kg				<350			
Bromophenyl Phenyl Ether, 4-	µg/kg				<350			

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016754	1016755	1016756	1016757	1016757	1016758	1016759
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	11:20	11:30	11:41	12:18	12:18	12:25	12:30
	Sample Depth	10' - 12'	12' - 14'	14' - 15'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA
	Lab. Number	96-3917-042	96-3918-043	96-3919-044	AEL96009076	96-3920-045	96-3923-050	96-3924-051
Constituent	Units							
Butyl Benzyl Phthalate	µg/kg				<350			
Chloronaphthalene, 2-	µg/kg				<350			
Chlorophenol, 2-	µg/kg				<350			
Chlorophenyl Phenyl Ether, 4-	µg/kg				<350			
Chrysene	µg/kg				<350 N1			
Di-n-butyl Phthalate	µg/kg				<350			
Di-n-octyl Phthalate	µg/kg				<350			
Dibenzo[a,h]anthracene	µg/kg				<350			
Dichlorobenzidine, 3,3'-	µg/kg				<350			
Dichlorophenol, 2,4-	µg/kg				<350			
Diethyl Phthalate	µg/kg				<350			
Dimethyl Phthalate	µg/kg				<350			
Dimethylphenol, 2,4-	µg/kg				<350			
Dinitro-o-cresol, 4,6-	µg/kg				<350			
Dinitrophenol, 2,4-	µg/kg				<350			
Dinitrotoluene, 2,4-	µg/kg				<350			
Dinitrotoluene, 2,6-	µg/kg				<350			
Diphenylhydrazine, 1,2-	µg/kg				<350			
Fluoranthene	µg/kg				<350 N1			
Fluorene	µg/kg				<350			
Hexachlorobenzene	µg/kg				<350			
Hexachlorobutadiene	µg/kg				<350			
Hexachlorocyclopentadiene	µg/kg				<350			
Hexachloroethane	µg/kg				<350			
Indeno(1,2,3-cd)pyrene	µg/kg				<350 N1			
Isophorone	µg/kg				<350			
N-nitroso-n-propylamine	µg/kg				<350			
N-nitrosodimethylamine	µg/kg				<350			

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016754	1016755	1016756	1016757	1016757	1016758	1016759
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	11:20	11:30	11:41	12:18	12:18	12:25	12:30
	Sample Depth	10' - 12'	12' - 14'	14' - 15'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA
	Lab. Number	96-3917-042	96-3918-043	96-3919-044	AEL96009076	96-3920-045	96-3923-050	96-3924-051
Constituent	Units							
N-nitrosodiphenylamine	µg/kg				<350			
Naphthalene	µg/kg				<350			
Nitrobenzene	µg/kg				<350			
Nitrophenol,2-	µg/kg				<350			
Nitrophenol,4-	µg/kg				<350			
Pentachlorophenol	µg/kg				<350			
Phenanthrene	µg/kg				<350 N1			
Phenol	µg/kg				<350			
Propane),2,2'-oxybis(2-chloro-	µg/kg				<350			
Pyrene	µg/kg				<350 N1			
Trichlorobenzene,1,2,4-	µg/kg				<350			
Trichlorophenol,2,4,6-	µg/kg				<350			
Acetone	µg/kg				<20			
Acrolein	µg/kg				<10			
Acrylonitrile	µg/kg				<10			
Benzene	µg/kg				<3.9			
Benzene (screening)	µg/kg	<13	<15	<15		<16	<8	<7
Bromobenzene	µg/kg				<3.9			
Bromoform	µg/kg				<3.9			
Carbon Disulfide	µg/kg				<3.9			
Carbon Tetrachloride	µg/kg				<3.9			
Chlorobenzene	µg/kg				<3.9			
Chlorodibromomethane	µg/kg				<3.9			
Chloroethane	µg/kg				<3.9			
Chloroethyl Vinyl Ether,2-	µg/kg				<3.9			
Chloroform	µg/kg				<3.9			
Chlorotoluene,o-	µg/kg				<3.9			
Chlorotoluene,p-	µg/kg				<3.9			

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SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	NA-SB-01	NA-SB-01	NA-SB-01	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016754	1016755	1016756	1016757	1016757	1016758	1016759
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	11:20	11:30	11:41	12:18	12:18	12:25	12:30
	Sample Depth	10' - 12'	12' - 14'	14' - 15'	0' - 2'	0' - 2'	2' - 4'	4' - 6'
	Laboratory	LEA	LEA	LEA	AEL	LEA	LEA	LEA
	Lab. Number	96-3917-042	96-3918-043	96-3919-044	AEL96009076	96-3920-045	96-3923-050	96-3924-051
Constituent	Units							
Dibromomethane	µg/kg				<3.9			
Dichlorobenzene, 1,2-	µg/kg				<3.9			
Dichlorobenzene, 1,3-	µg/kg				<3.9			
Dichlorobenzene, 1,4-	µg/kg				<3.9			
Dichlorobromomethane	µg/kg				<3.9			
Dichlorodifluoromethane	µg/kg				<3.9			
Dichloroethane, 1,1-	µg/kg				<3.9			
Dichloroethane, 1,2-	µg/kg				<3.9			
Dichloroethylene, 1,1-	µg/kg				<3.9			
Dichloroethylene, 1,2-cis-	µg/kg				<3.9			
Dichloroethylene, 1,2-trans-	µg/kg				<3.9			
Dichloropropane, 1,2-	µg/kg				<3.9			
Dichloropropylene, 1,3-cis-	µg/kg				<3.9			
Dichloropropylene, 1,3-trans-	µg/kg				<3.9			
Ethylbenzene	µg/kg				<3.9			
Ethylbenzene (screening)	µg/kg	<28	<33	<33		<4	<16	<14
Hexanone, 2-	µg/kg				<9.8			
Methyl Bromide	µg/kg				<3.9			
Methyl Chloride	µg/kg				<3.9			
Methyl Ethyl Ketone	µg/kg				<9.8			
Methyl-2-pentanone, 4-	µg/kg				<10			
Methyl-tert-butyl Ether	µg/kg				<3.9			
Methylene Chloride	µg/kg				<3.9			
Styrene	µg/kg				<3.9			
Tetrachloroethane, 1,1,1,2-	µg/kg				<3.9			
Tetrachloroethane, 1,1,2,2-	µg/kg				<3.9			
Tetrachloroethylene	µg/kg				<3.9			
Tetrachloroethylene (screening)	µg/kg	<35	<41	<41		<42	<20	<18

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Table 3
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	Location ID	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016760	1016761	1016762	1016763	1016764	1016764	1016765
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	12:40	12:45	13:45	13:52	14:02	14:02	14:11
	Sample Depth	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	12' - 14'	14' - 15'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	96-3925-052	96-3926-053	96-3927-054	96-3928-055	AEL96009141	96-3929-056	96-3930-057
Constituent	Units							
Date Metals Analyzed	-					08/20/1996		
Date Organics Analyzed	-	08/15/1996	08/15/1996	08/15/1996	08/15/1996	08/22/1996	08/15/1996	08/15/1996
Date Semi-volatile Organics Analyzed	-					08/29/1996		
Arsenic	mg/kg					3.53		
Barium	mg/kg					153		
Cadmium	mg/kg					4.43		
Chromium	mg/kg					29.5		
Copper	mg/kg					24.3		
Lead	mg/kg					<28.6		
Mercury	mg/kg					<0.286		
Nickel	mg/kg					26.2		
Selenium	mg/kg					<1.43		
Silver	mg/kg					<7.15		
Zinc	mg/kg					87.5		
Total Petroleum Hydrocarbons	mg/kg					<63.6		
Acenaphthene	µg/kg					<460		
Acenaphthylene	µg/kg					<460		
Anthracene	µg/kg					<460		
Benzidine	µg/kg					<460		
Benzo[a]anthracene	µg/kg					<460		
Benzo[a]pyrene	µg/kg					<460		
Benzo[b]fluoranthene	µg/kg					<460		
Benzo[ghi]perylene	µg/kg					<460		
Benzo[k]fluoranthene	µg/kg					<460		
Bis(2-chloroethoxy)methane	µg/kg					<460		
Bis(2-chloroethyl) Ether	µg/kg					<460		
Bis(2-ethylhexyl)phthalate	µg/kg					<460		
Bromophenyl Phenyl Ether,4-	µg/kg					<460		

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SUMMARY OF ANALYTICAL RESULTS - SOIL
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	Location ID	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016760	1016761	1016762	1016763	1016764	1016764	1016763
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	12:40	12:45	13:45	13:52	14:02	14:02	14:11
	Sample Depth	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	12' - 14'	14' - 15'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	96-3925-052	96-3926-053	96-3927-054	96-3928-055	AEL96009141	96-3929-056	96-3930-057
Constituent	Units							
Butyl Benzyl Phthalate	µg/kg					<460		
Chlorosulphthalene,2-	µg/kg					<460		
Chlorophenol,2-	µg/kg					<460		
Chlorophenyl Phenyl Ether,4-	µg/kg					<460		
Chrysene	µg/kg					<460		
Di-n-butyl Phthalate	µg/kg					<930		
Di-n-octyl Phthalate	µg/kg					<460		
Dibenzo[a,h]anthracene	µg/kg					<460		
Dichlorobenzidine,3,3'-	µg/kg					<460		
Dichlorophenol,2,4-	µg/kg					<460		
Diethyl Phthalate	µg/kg					<460		
Dimethyl Phthalate	µg/kg					<460		
Dimethylphenol,2,4-	µg/kg					<460		
Dinitro-o-cresol,4,6-	µg/kg					<460		
Dinitrophenol,2,4-	µg/kg					<460		
Dinitrotoluene,2,4-	µg/kg					<460		
Dinitrotoluene,2,6-	µg/kg					<460		
Diphenylhydrazine,1,2-	µg/kg					<460		
Fluoranthene	µg/kg					<460		
Fluorene	µg/kg					<460		
Hexachlorobenzene	µg/kg					<460		
Hexachlorobutadiene	µg/kg					<460		
Hexachlorocyclopentadiene	µg/kg					<460		
Hexachloroethane	µg/kg					<460		
Indeno(1,2,3-cd)pyrene	µg/kg					<460		
Isophorone	µg/kg					<460		
N-nitroso-n-propylamine	µg/kg					<460		
N-nitrosodimethylamine	µg/kg					<460		

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	Location ID	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016760	1016761	1016762	1016763	1016764	1016764	1016765
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	12:40	12:45	13:45	13:52	14:02	14:02	14:11
	Sample Depth	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	12' - 14'	14' - 15'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	96-3925-052	96-3926-053	96-3927-054	96-3928-055	AEL96009141	96-3929-056	96-3930-057
Constituent	Units							
N-nitrosodiphenylamine	µg/kg					<460		
Naphthalene	µg/kg					<460		
Nitrobenzene	µg/kg					<460		
Nitrophenol,2-	µg/kg					<460		
Nitrophenol,4-	µg/kg					<460		
Pentachlorophenol	µg/kg					<460		
Phenanthrene	µg/kg					<460		
Phenol	µg/kg					<460		
Propane,2,2'-oxybis(2-chloro-	µg/kg					<460		
Pyrene	µg/kg					<460		
Trichlorobenzene,1,2,4-	µg/kg					<460		
Trichlorophenol,2,4,6-	µg/kg					<460		
Acetone	µg/kg					<120		
Acrolein	µg/kg					<62		
Acrylonitrile	µg/kg					<62		
Benzene	µg/kg					<25		
Benzene (screening)	µg/kg	<6	<7	<7	<7		<7	<7
Bromobenzene	µg/kg					<25		
Bromoform	µg/kg					<25		
Carbon Disulfide	µg/kg					<25		
Carbon Tetrachloride	µg/kg					<25		
Chlorobenzene	µg/kg					<25		
Chlorodibromomethane	µg/kg					<25		
Chloroethane	µg/kg					<25		
Chloroethyl Vinyl Ether,2-	µg/kg					<25		
Chloroform	µg/kg					<25		
Chlorotoluene,o-	µg/kg					<25		
Chlorotoluene,p-	µg/kg					<25		

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	Location ID	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02	NA-SB-02
	Sample ID	1016760	1016761	1016762	1016763	1016764	1016764	1016765
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	12:40	12:45	13:45	13:52	14:02	14:02	14:11
	Sample Depth	6' - 8'	6' - 8'	8' - 10'	10' - 12'	12' - 14'	12' - 14'	14' - 15'
	Laboratory	LEA	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	96-3925-032	96-3926-053	96-3927-054	96-3928-055	AEL96009141	96-3929-056	96-3930-057
Constituent	Units							
Dibromomethane	µg/kg					<25		
Dichlorobenzene, 1,2-	µg/kg					<25		
Dichlorobenzene, 1,3-	µg/kg					<25		
Dichlorobenzene, 1,4-	µg/kg					<25		
Dichlorobromomethane	µg/kg					<25		
Dichlorodifluoromethane	µg/kg					<25		
Dichloroethane, 1,1-	µg/kg					<25		
Dichloroethane, 1,2-	µg/kg					<25		
Dichloroethylene, 1,1-	µg/kg					<25		
Dichloroethylene, 1,2-cis-	µg/kg					<25		
Dichloroethylene, 1,2-trans-	µg/kg					<25		
Dichloropropane, 1,2-	µg/kg					<25		
Dichloropropylene, 1,3-cis-	µg/kg					<25		
Dichloropropylene, 1,3-trans-	µg/kg					<25		
Ethylbenzene	µg/kg					<25		
Ethylbenzene (screening)	µg/kg	<13	<14	<14	<14		<14	<14
Hexanone, 2-	µg/kg					<62		
Methyl Bromide	µg/kg					<25		
Methyl Chloride	µg/kg					<25		
Methyl Ethyl Ketone	µg/kg					<62		
Methyl-2-pentanone, 4-	µg/kg					<62		
Methyl-tert-butyl Ether	µg/kg					<25		
Methylene Chloride	µg/kg					<25		
Styrene	µg/kg					<25		
Tetrachloroethane, 1,1,1,2-	µg/kg					<25		
Tetrachloroethane, 1,1,2,2-	µg/kg					<25		
Tetrachloroethylene	µg/kg					<25		
Tetrachloroethylene (screening)	µg/kg	<17	<18	<18	<18		<18	<18

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Table 3
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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03
	Sample ID	1016767	1016767	1016768	1016769	1016770	1016770	1016771
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	:	:	:	:	:	:	:
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL96009142	96-3932-059	96-3933-060	96-3934-061	AEL96009143	96-3937-066	96-3938-067
Constituent	Units							
Date Metals Analyzed	-	08/20/1996				08/20/1996		
Date Organics Analyzed	-	08/22/1996	08/15/1996	08/15/1996	08/15/1996	08/22/1996	08/15/1996	08/15/1996
Date Semi-volatile Organics Analyzed	-	08/30/1996				08/30/1996		
Arsenic	mg/kg	3.09				<1.17		
Barium	mg/kg	16.5				13.9		
Cadmium	mg/kg	<3.13				<3.5		
Chromium	mg/kg	6.78				<5.84		
Copper	mg/kg	22.9				<5.84		
Lead	mg/kg	<20.9				<23.3		
Mercury	mg/kg	<0.209				<0.233		
Nickel	mg/kg	<10.4				<11.7		
Selenium	mg/kg	<1.04				<1.17		
Silver	mg/kg	<5.22				<5.84		
Zinc	mg/kg	20.9				16.1		
Total Petroleum Hydrocarbons	mg/kg	<35.3				<41.0		
Acenaphthene	µg/kg	<350				<410		
Acenaphthylene	µg/kg	<350				<410		
Anthracene	µg/kg	<350				<410		
Benidine	µg/kg	<350				<410		
Benzo[a]anthracene	µg/kg	<350 N1				<410		
Benzo[a]pyrene	µg/kg	<350 N1				<410		
Benzo[b]fluoranthene	µg/kg	<350 N1				<410		
Benzo[ghi]perylene	µg/kg	<350 N1				<410		
Benzo[k]fluoranthene	µg/kg	<350 N1				<410		
Bis(2-chloroethoxy)methane	µg/kg	<350				<410		
Bis(2-chloroethyl) Ether	µg/kg	<350				<410		
Bis(2-ethylhexyl)phthalate	µg/kg	<350				<410		
Bromophenyl Phenyl Ether, 4-	µg/kg	<350				<410		

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03
	Sample ID	1016767	1016767	1016768	1016769	1016770	1016770	1016771
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	:	:	:	:	:	:	:
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL96009142	96-3932-059	96-3933-060	96-3934-061	AEL96009143	96-3937-066	96-3938-067
Constituent	Units							
Butyl Benzyl Phthalate	µg/kg	<350				<410		
Chloronaphthalene,2-	µg/kg	<350				<410		
Chlorophenol,2-	µg/kg	<350				<410		
Chlorophenyl Phenyl Ether,4-	µg/kg	<350				<410		
Chrysene	µg/kg	<350 N1				<410		
Di-n-butyl Phthalate	µg/kg	<880				<1000		
Di-n-octyl Phthalate	µg/kg	<350				<410		
Dibenzo[a,h]anthracene	µg/kg	<350				<410		
Dichlorobenzidine,3,3'-	µg/kg	<350				<410		
Dichlorophenol,2,4-	µg/kg	<350				<410		
Diethyl Phthalate	µg/kg	<350				<410		
Dimethyl Phthalate	µg/kg	<350				<410		
Dimethylphenol,2,4-	µg/kg	<350				<410		
Dinitro-o-cresol,4,6-	µg/kg	<350				<410		
Dinitrophenol,2,4-	µg/kg	<350				<410		
Dinitrotoluene,2,4-	µg/kg	<350				<410		
Dinitrotoluene,2,6-	µg/kg	<350				<410		
Diphenylhydrazine,1,2-	µg/kg	<350				<410		
Fluoranthene	µg/kg	<350 N1				<410		
Fluorene	µg/kg	<350				<410		
Hexachlorobenzene	µg/kg	<350				<410		
Hexachlorobutadiene	µg/kg	<350				<410		
Hexachlorocyclopentadiene	µg/kg	<350				<410		
Hexachloroethane	µg/kg	<350				<410		
Indeno(1,2,3-cd)pyrene	µg/kg	<350 N1				<410		
Isophorone	µg/kg	<350				<410		
N-nitroso-n-propylamine	µg/kg	<350				<410		
N-nitrosodimethylamine	µg/kg	<350				<410		

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03
	Sample ID	1016767	1016767	1016768	1016769	1016770	1016770	1016771
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	:	:	:	:	:	:	:
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL96009142	96-3932-059	96-3933-060	96-3934-061	AEL96009143	96-3937-066	96-3938-067
Constituent	Units							
N-nitrosodiphenylamine	µg/kg	<350				<410		
Naphthalene	µg/kg	<350				<410		
Nitrobenzene	µg/kg	<350				<410		
Nitrophenol,2-	µg/kg	<350				<410		
Nitrophenol,4-	µg/kg	<350				<410		
Pentachlorophenol	µg/kg	<350				<410		
Phenanthrene	µg/kg	<350 N1				<410		
Phenol	µg/kg	<350				<410		
Propane),2,2'-oxybis(2-chloro-	µg/kg	<350				<410		
Pyrene	µg/kg	<350 N1				<410		
Trichlorobenzene,1,2,4-	µg/kg	<350				<410		
Trichlorophenol,2,4,6-	µg/kg	<350				<410		
Acetone	µg/kg	<23				<33		
Acrolein	µg/kg	<11				<13		
Acrylonitrile	µg/kg	<11				<13		
Benzene	µg/kg	<4.5				<5.1		
Benzene (screening)	µg/kg		<7	<8	<8		<15	<8
Bromobenzene	µg/kg	<4.5				<5.1		
Bromoform	µg/kg	<4.5				<5.1		
Carbon Disulfide	µg/kg	<4.5				<5.1		
Carbon Tetrachloride	µg/kg	<4.5				<5.1		
Chlorobenzene	µg/kg	<4.5				<5.1		
Chlorodibromomethane	µg/kg	<4.5				<5.1		
Chloroethane	µg/kg	<4.5				<5.1		
Chloroethyl Vinyl Ether,2-	µg/kg	<4.5				<5.1		
Chloroform	µg/kg	<4.5				<5.1		
Chlorotoluene,o-	µg/kg	<4.5				<5.1		
Chlorotoluene,p-	µg/kg	<4.5				<5.1		

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03	NA-SB-03
	Sample ID	1016767	1016767	1016768	1016769	1016770	1016770	1016771
	Sample Date	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996	08/09/1996
	Sample Time	:	:	:	:	:	:	:
	Sample Depth	0' - 2'	0' - 2'	2' - 4'	4' - 6'	6' - 8'	6' - 8'	8' - 10'
	Laboratory	AEL	LEA	LEA	LEA	AEL	LEA	LEA
	Lab. Number	AEL96009142	96-3932-059	96-3933-060	96-3934-061	AEL96009143	96-3937-066	96-3938-067
Constituent	Units							
Dibromomethane	µg/kg	<4.5				<5.1		
Dichlorobenzene, 1,2-	µg/kg	<4.5				<5.1		
Dichlorobenzene, 1,3-	µg/kg	<4.5				<5.1		
Dichlorobenzene, 1,4-	µg/kg	<4.5				<5.1		
Dichlorobromomethane	µg/kg	<4.5				<5.1		
Dichlorodifluoromethane	µg/kg	<4.5				<5.1		
Dichloroethane, 1,1-	µg/kg	<4.5				<5.1		
Dichloroethane, 1,2-	µg/kg	<4.5				<5.1		
Dichloroethylene, 1,1-	µg/kg	<4.5				<5.1		
Dichloroethylene, 1,2-cis-	µg/kg	<4.5				<5.1		
Dichloroethylene, 1,2-trans-	µg/kg	<4.5				<5.1		
Dichloropropane, 1,2-	µg/kg	<4.5				<5.1		
Dichloropropylene, 1,3-cis-	µg/kg	<4.5				<5.1		
Dichloropropylene, 1,3-trans-	µg/kg	<4.5				<5.1		
Ethylbenzene	µg/kg	<4.5				<5.1		
Ethylbenzene (screening)	µg/kg		<15	<18	<17		<33	<17
Hexanone, 2-	µg/kg	<11				<13		
Methyl Bromide	µg/kg	<4.5				<5.1		
Methyl Chloride	µg/kg	<4.5				<5.1		
Methyl Ethyl Ketone	µg/kg	<11				<13		
Methyl-2-pentanone, 4-	µg/kg	<11				<13		
Methyl-tert-butyl Ether	µg/kg	<4.5				<5.1		
Methylene Chloride	µg/kg	<4.5				<5.1		
Styrene	µg/kg	<4.5				<5.1		
Tetrachloroethane, 1,1,1,2-	µg/kg	<4.5				<5.1		
Tetrachloroethane, 1,1,2,2-	µg/kg	<4.5				<5.1		
Tetrachloroethylene	µg/kg	<4.5				<5.1		
Tetrachloroethylene (screening)	µg/kg		<18	<23	<22		<41	<22

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03				
	Sample ID	1016772	1016773	1016774				
	Sample Date	08/09/1996	08/09/1996	08/09/1996				
	Sample Time	:	:	:				
	Sample Depth	10' - 12'	12' - 14'	14' - 15'				
	Laboratory	LEA	LEA	LEA				
	Lab. Number	96-3940-069	96-3941-070	96-3942-071				
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-	08/15/1996	08/15/1996	08/15/1996				
Date Semi-volatile Organics Analyzed	-							
Arsenic	mg/kg							
Barium	mg/kg							
Cadmium	mg/kg							
Chromium	mg/kg							
Copper	mg/kg							
Lead	mg/kg							
Mercury	mg/kg							
Nickel	mg/kg							
Selenium	mg/kg							
Silver	mg/kg							
Zinc	mg/kg							
Total Petroleum Hydrocarbons	mg/kg							
Acenaphthene	µg/kg							
Acenaphthylene	µg/kg							
Anthracene	µg/kg							
Benzidine	µg/kg							
Benzo[a]anthracene	µg/kg							
Benzo[a]pyrene	µg/kg							
Benzo[b]fluoranthene	µg/kg							
Benzo[ghi]perylene	µg/kg							
Benzo[k]fluoranthene	µg/kg							
Bis(2-chloroethoxy)methane	µg/kg							
Bis(2-chloroethyl) Ether	µg/kg							
Bis(2-ethylhexyl)phthalate	µg/kg							
Bromophenyl Phenyl Ether, 4-	µg/kg							

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03				
	Sample ID	1016772	1016773	1016774				
	Sample Date	08/09/1996	08/09/1996	08/09/1996				
	Sample Time	:	:	:				
	Sample Depth	10' - 12'	12' - 14'	14' - 15'				
	Laboratory	LEA	LEA	LEA				
	Lab. Number	96-3940-069	96-3941-070	96-3942-071				
Constituent	Units							
Butyl Benzyl Phthalate	µg/kg							
Chloronaphthalene,2-	µg/kg							
Chlorophenol,2-	µg/kg							
Chlorophenyl Phenyl Ether,4-	µg/kg							
Chrysene	µg/kg							
Di-n-butyl Phthalate	µg/kg							
Di-n-octyl Phthalate	µg/kg							
Dibenzo[a,h]anthracene	µg/kg							
Dichlorobenzidine,3,3'-	µg/kg							
Dichlorophenol,2,4-	µg/kg							
Diethyl Phthalate	µg/kg							
Dimethyl Phthalate	µg/kg							
Dimethylphenol,2,4-	µg/kg							
Dinitro-o-cresol,4,6-	µg/kg							
Dinitrophenol,2,4-	µg/kg							
Dinitrotoluene,2,4-	µg/kg							
Dinitrotoluene,2,6-	µg/kg							
Diphenylhydrazine,1,2-	µg/kg							
Fluoranthene	µg/kg							
Fluorene	µg/kg							
Hexachlorobenzene	µg/kg							
Hexachlorobutadiene	µg/kg							
Hexachlorocyclopentadiene	µg/kg							
Hexachloroethane	µg/kg							
Indeno(1,2,3-cd)pyrene	µg/kg							
Isophorone	µg/kg							
N-nitroso-n-propylamine	µg/kg							
N-nitrosodimethylamine	µg/kg							

Notes: 1. Printed on 05/07/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

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Page 23 of 25

	Location ID	NA-SB-03	NA-SB-03	NA-SB-03				
	Sample ID	1016772	1016773	1016774				
	Sample Date	08/09/1996	08/09/1996	08/09/1996				
	Sample Time	:	:	:				
	Sample Depth	10' - 12'	12' - 14'	14' - 15'				
	Laboratory	LEA	LEA	LEA				
	Lab. Number	96-3940-069	96-3941-070	96-3942-071				
Constituent	Units							
N-nitrosodiphenylamine	µg/kg							
Naphthalene	µg/kg							
Nitrobenzene	µg/kg							
Nitrophenol,2-	µg/kg							
Nitrophenol,4-	µg/kg							
Pentachlorophenol	µg/kg							
Phenanthrene	µg/kg							
Phenol	µg/kg							
Propane),2,2'-oxybis(2-chloro-	µg/kg							
Pyrene	µg/kg							
Trichlorobenzene,1,2,4-	µg/kg							
Trichlorophenol,2,4,6-	µg/kg							
Acetone	µg/kg							
Acrolein	µg/kg							
Acrylonitrile	µg/kg							
Benzene	µg/kg							
Benzene (screening)	µg/kg	<8	<8	<8				
Bromobenzene	µg/kg							
Bromoform	µg/kg							
Carbon Disulfide	µg/kg							
Carbon Tetrachloride	µg/kg							
Chlorobenzene	µg/kg							
Chlorodibromomethane	µg/kg							
Chloroethane	µg/kg							
Chloroethyl Vinyl Ether,2-	µg/kg							
Chloroform	µg/kg							
Chlorotoluene,o-	µg/kg							
Chlorotoluene,p-	µg/kg							

Notes: 1. Printed on 05/01/98

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Table 3
SUMMARY OF ANALYTICAL RESULTS - SOIL
P&W East Hartford: Former Army Barracks Septic Systems

DRAFT

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	Location ID	NA-SB-03	NA-SB-03	NA-SB-03				
	Sample ID	1016772	1016773	1016774				
	Sample Date	08/09/1996	08/09/1996	08/09/1996				
	Sample Time	:	:	:				
	Sample Depth	10' - 12'	12' - 14'	14' - 15'				
	Laboratory	LEA	LEA	LEA				
	Lab. Number	96-3940-069	96-3941-070	96-3942-071				
Constituent	Units							
Dibromomethane	µg/kg							
Dichlorobenzene, 1,2-	µg/kg							
Dichlorobenzene, 1,3-	µg/kg							
Dichlorobenzene, 1,4-	µg/kg							
Dichlorobromomethane	µg/kg							
Dichlorodifluoromethane	µg/kg							
Dichloroethane, 1,1-	µg/kg							
Dichloroethane, 1,2-	µg/kg							
Dichloroethylene, 1,1-	µg/kg							
Dichloroethylene, 1,2-cis-	µg/kg							
Dichloroethylene, 1,2-trans-	µg/kg							
Dichloropropane, 1,2-	µg/kg							
Dichloropropylene, 1,3-cis-	µg/kg							
Dichloropropylene, 1,3-trans-	µg/kg							
Ethylbenzene	µg/kg							
Ethylbenzene (screening)	µg/kg	<18	<17	<17				
Hexanone, 2-	µg/kg							
Methyl Bromide	µg/kg							
Methyl Chloride	µg/kg							
Methyl Ethyl Ketone	µg/kg							
Methyl-2-pentanone, 4-	µg/kg							
Methyl-tert-butyl Ether	µg/kg							
Methylene Chloride	µg/kg							
Styrene	µg/kg							
Tetrachloroethane, 1,1,1,2-	µg/kg							
Tetrachloroethane, 1,1,2,2-	µg/kg							
Tetrachloroethylene	µg/kg							
Tetrachloroethylene (screening)	µg/kg	<23	<21	<22				

Notes: 1. Printed on 03/07/98

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Notes: 1. Printed on 05/07/98

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DRAWINGS

**US EPA New England
RCRA Document Management System
Image Target Sheet**

RDMS Document ID # 2227

Facility Name: PRATT & WHITNEY (MAIN ST)

Facility ID#: CTD990672081

Phase Classification: R-5

Purpose of Target Sheet:

☒ **Oversized (in Site File)** ☐ **Oversized (in Map Drawer)**

☐ **Page(s) Missing (Please Specify Below)**

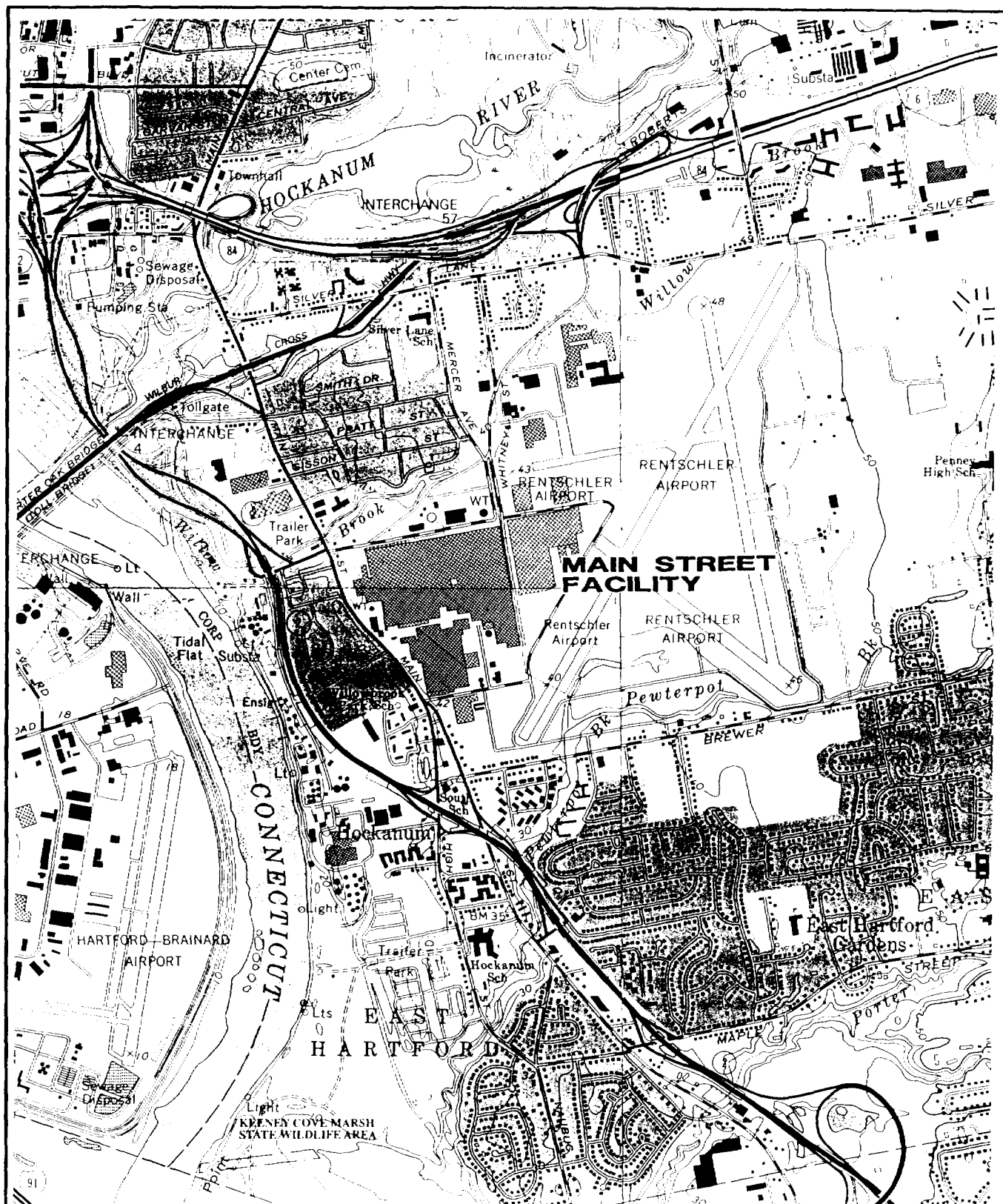
☐ **Privileged** ☐ **Other (Provide Purpose Below)**

Description of Oversized Material, if applicable:

SOIL INVESTIGATIONS- FORMER ARMY BARRACKS
AREA LOCATION AND CONSTITUENTS DETECTED
MAP- DRAWING 1

☒ **Map** ☐ **Photograph** ☐ **Other (Specify Below)**

*** Please Contact the EPA New England RCRA Records Center to View This Document ***



MAP REFERENCE:
USGS 7.5 MINUTE SERIES QUADRANGLES
FOR HARTFORD NORTH, HARTFORD SOUTH,
GLASTONBURY, AND MANCHESTER CONN.,
DATED 1964 & 1963 AND REVISED 1992.

1000 0 1000 2000 3000



SCALE IN FEET

AIRPORT/KLONDIKE AREA

SUMMARY SITE INVESTIGATION AND REMEDIATION REPORT

PRATT & WHITNEY MAIN STREET FACILITY USGS TOPOGRAPHIC MAP

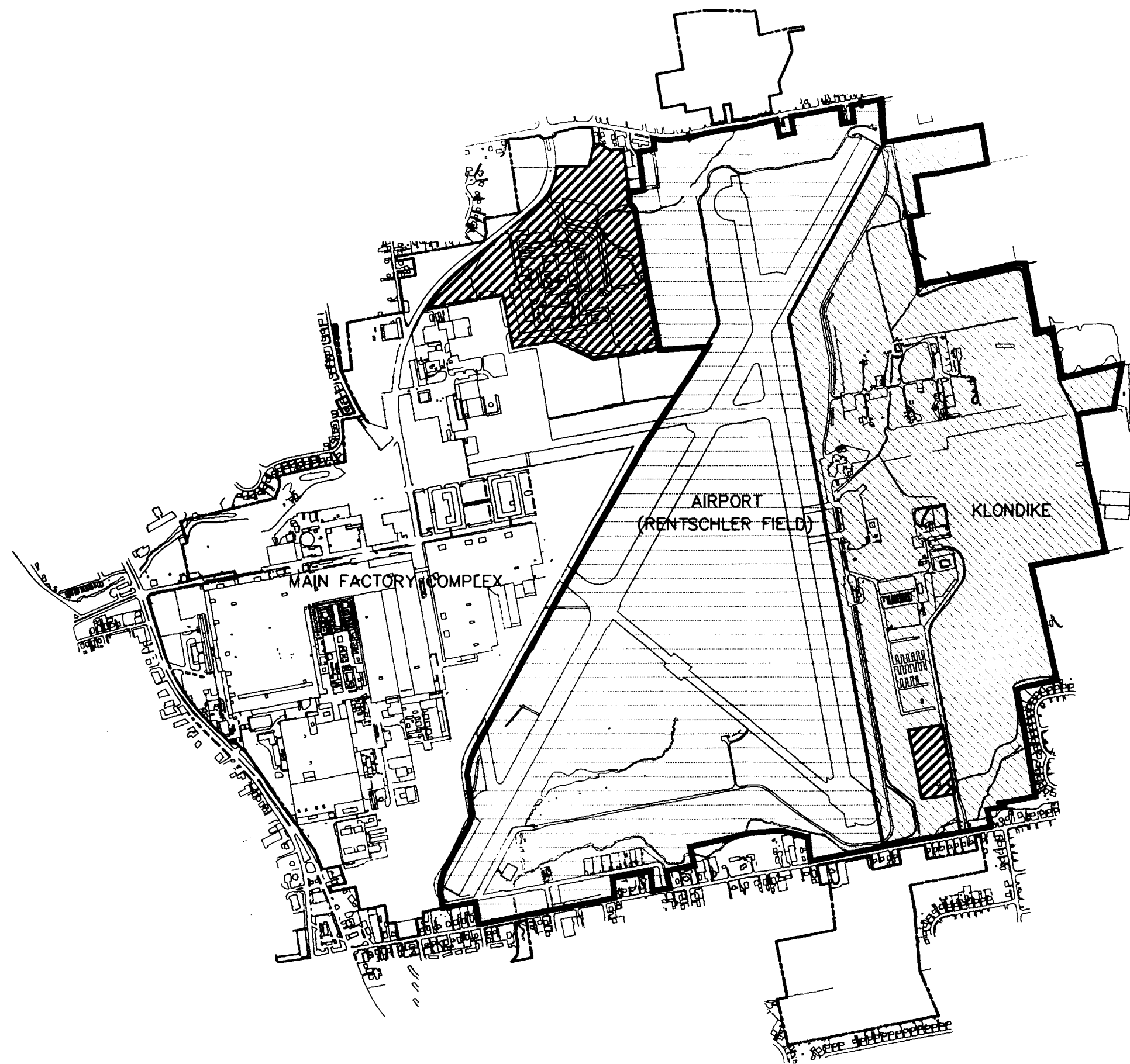
FIG. 1

Comm.No.
68V8124



Pratt & Whitney
A United Technologies Company



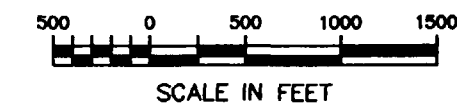


LEGEND

- Property line
(Approximate location)
- Site Area boundary
(Approximate location)
- Airport Area
(Rentschler Field)
- Klondike Area
- Areas which are not part of the
East Hartford Main Street Facility

MAP REFERENCE:

SURVEY CONTROL BY FUSS & O'NEILL, INC
 PHOTOGRAMMETRY BY GOLDEN AERIAL SURVEYS, INC
 DATE OF PHOTOGRAPHY: 3/17/91



AIRPORT/KLONDIKE AREA
 SUMMARY SITE INVESTIGATION AND REMEDIATION REPORT
PRATT & WHITNEY MAIN STREET FACILITY
SITE PLAN
FIG.2

Comm.No.
68V8124

Pratt & Whitney
 A United Technologies Company

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